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EDITORIALS.

AN ANTI-VIVISECTION PLAY, IN THREE ACTS.

THE scene of the first act is laid in Carnegie Lyceum, in New York City, where there was recently an enthusiastic gathering. Dinners, of which roasted or broiled meats (animals, by the way, almost invariably meet tragic deaths) were a part, were being comfortably digested; so that everybody was in a position to take an amiable interest in the proceedings. The great majority in this audience were women, who wore the plumes of slaughtered birds in their hats; and (it being evening) pet dogs, whose tails had been docked, and whose ears had been clipped, were reposing undisturbed at home. The lady president of the Anti-vivisection Society (in alliance with the International Anti-vaccination Union) spoke with the precision of statement so characteristic of the feminine mind. The great difficulty in getting started in this country, she declared, is because, "while no doubt 50 per cent. of the medical profession are to-day at heart opposed to vivisection, its leaders in New York, confident in their eminence and power to punish, have sent out a practical prohibition to all physicians that they should not approve or sustain in any manner any movement toward a restriction of vivisection." Several public-spirited gentlemen were on the platform. One among these, in terms, conspicuous for man-like temperance of expression, stated that those medical experimenters who vivisected animals were "virtuosos of agony, in whom curiosity, vanity or scientific zeal has supplanted humanity, and to whom harmonies or discords of agony or long-drawn cadences of torture struck from quivering nerves are music." One clergyman contended that the practices condemned are continued for "the purposes of commercialism, to obtain anti-toxins, which have not yet proved their efficacy, and in some instances have been known to have increased disease instead of decreasing it." Another maintained that vivisection is "contrary primarily to the law of God"; this clergyman would no doubt a generation ago have denounced the administration of chloroform to women in labor, on the basis of some scriptural expression. The Rockefeller Institute was especially stigmatized and "resoluted" against as being "the principal theater of vivisection operations in this part of the world to-day." A bill was read, which had been introduced in the legislature at Albany; and the assemblyman who was responsible for it naively observed that in passing it the state would incur no expense, for the Anti-vivisection Society and the Humane Society had offered to provide the salaries of the inspectors proposed in the bill.

The second act of this play takes place in the city of New Brunswick, N. J., where the two villains of the cast, by name Dr. H. H. Janeway and Dr. E. I. Cronk, have been laboring under the obsession that without animal experimentation medicine would be "but a savage art— not even the shadow of the present science of cure and preven-

tion." Being desirous of perfecting an operative procedure for gastric cancer and tuberculosis, they have done tentative operations on animals; and have also, in a spirit equally unscientific and calloused, removed a lobe of one lung from a dog named Pete. The sufferings which a veracious lady of that city had alleged this dog was enduring have divided that generally peaceful and sane community into two camps. A somewhat Gilbertian warfare has resulted; most of the contestants, especially the feminine participants, "did not know, what it was all about anyway." A superb strategic move was the arrest of Drs. Janeway and Cronk on charges of cruel usage of the dog Pete, made by the aforesaid tender-hearted lady; the miscreants happily regained freedom when bail of $300 for each was paid. Pete, because of whose agonies the arrests were made, was sought for in his usual comfortable bunk in Dr. Janeway's barn. But the martyr, who "for the sake of science, had given most of himself away," was absent; he (or what remained of him) was found near by, engaged, with all his old-time zeal, in his favorite occupation of chasing the New Brunswick cat; which he, in his turn, was trying to vivisect.

The third act takes place on a bleak bank of the East River, with the reprehended Rockefeller Institute providing the back scene. Several hours before dawn a venerable gentleman rang the bell at the entrance door of the building. But there was no one to respond to his ringing. He therefore sat down before the doorstep, or waited about it in most inclement weather, until daylight. Being then admitted, he made known his errand. He is connected with Bera College, where either a real or suspected case of epidemic cerebrospinal meningitis has developed; and he was most anxious to secure some of the serum which Dr. Flexner and his associates have, largely through animal experimentation, evolved both for curative and prophylactic purposes, against that dreadful disease. At first it was thought to refuse his request, for the reason that the work on this serum is still in the experimental stage. Finally, however, on his assurance that it would be given only by skilled physicians, who would be responsible for its proper use, several vials of this serum were entrusted to him; and they were at once rushed off to Kentucky, in the hope that they would reach their destination within twenty-four hours. All men and women of really humanitarian instincts may reasonably entertain the belief that in this circumstance valuable human lives have thus been saved, and that much of the ghastliest sufferings in all medical experience has thus been averted.

The reader must decide for himself if this play has been a farce, a comedy, a drama, or a tragedy.

FINGER PRINT IDENTIFICATION.

Mr. Wm. A. Pinkerton has seen the finger print signature used in the interior of China, by merchants and others having occasion to sign a document. In that "benighted" region one keeps a cake of ink for that purpose ever at hand—or at one's finger tips. The great detective considers this method of personal identification to have obtained many centuries, perhaps thousands of years, in China; and it would seem that for all its use there have never been in the Middle Kingdom two identical thumb or finger prints belonging to different individuals.

From China the finger print system spread into Northern India where it was adopted early in the British occupation by the military authorities for the identification of native troops. Now all the white troops in India are registered by thumb print as a means of identifying deserters. Next English officers returning from Indian service and becoming police functionaries at home made it the present method of identifying criminals. To-day, in Great Britain every man and woman who has ever been

in custody has the finger prints registered for reference at any time by the police. And it is being sought to establish this system in American police affairs. Thus are not only the criminal identified; but also are the guiltless protected. Oftentimes (how often one hardly realizes who has not delved into the matter) innocent people are wrongly accused by reason of misleading photographs; but when thumb prints accompany the pictures the suspected person can easily prove his innocence.

But to Francis Galton must be accredited the formulation of finger print evidence into a workable system. He published his "Finger Prints" in 1892 and soon after his "Index of Finger Prints." Galton found that the chance of the finger prints of two individuals being identical is less than one in sixty-four billions. If therefore two such prints are found on comparison to be identical nothing in human logic can be surer than that they are the prints of the same person; if they are not identical they as surely belong to different people. The infinitesimal chance of error is still further eliminated if prints of thumb and several fingers are taken. The only requisite is that the prints be taken clearly enough to bring out all the lines.

These thumb and finger tip lines are more enduring than any other mark of the body; they do not vary from infancy to old age; the parents' prints in nowise resemble the child's; nor the twin's that of its twin. These lines persist after death, at least until after decomposition has set in. Injuries alone change them; but a scar or cut that has been printed would be additional identification. One presses his thumb tip (the natural moisture suffices) upon a pad of ordinary paper, or any such surface as wood, or glass, etc.; a jet black impalpable powder is then dusted on the imprint if the surface be white; a white powder upon a dark surface.

This finger print system of identification has erroneously been attributed to Bertillon. It was Galton who made it known to the latter, who was indeed long sceptical, preferring his own system of measurements.

The system has a number of uses apart from criminal procedures. Railways are by this means identifying employees. Banks thus identify foreigners; indeed there is one capitalist who will not permit a check of his to be cashed by his bank that has not his finger print beside his signature on this document. Some of our Government employees in the Canal Zone, as also our unlettered Indians, are paid by reference to their prints. The "his mark" of the untutored citizen is no identification at all; his finger print is an unforgeable signature.

Captain Joseph A. Faurot the head of the Identification Bureau of the New York City Police Department, would have every new born baby finger printed, the print to appear on the doctor's certificate; also every school child, every immigrant, as a basis for a really adequate and comprehensive vital registration. He would have lost identity in the United States done away with by the establishment of a Central Bureau in Washington, to which the finger prints of every member of our ninety millions must be forwarded for classification; to this Central federal bureau all other bureau, state and municipal would be contributory. There would be two sets of prints—one kept in the local bureau, the other sent to Washington.

Thus would the numberless unfortunates (some 38,000 yearly in the United States) found mysteriously dead, be identified—those dying in almshouses, in insane asylums, bodies found in rivers, the dead or injured in street accidents, in railways or steamship catastrophes. The helpless aphasic, the insane, and thousands taken ill away from their homes, could be restored to their families. The crime of infant abandonment could be detected. The finger printing of all policy holders would absolutely prevent substitution of a dead man's body for a live swindler. Election frauds could readily be ended. Finger-printed chauffeurs would not escape punishment for joy ride homicides and maimings.

IS THE MODEL TENEMENT A FAILURE?

A generation and more ago Goldwin Smith declared: "I cannot help thinking that the first and best object of charity is the improvement of the low quarters in our great cities, which cannot fail to be seed plants of disease as well as of barbarism and misery"; and sanitarians and humanitarians (especially those interested in anti-tuberculosis propaganda) have been zealous for the erection and maintenance of model tenements for the better and more healthful housing of the poor. The general principles underlying the establishment of model tenements are no doubt adequately expressed in Mr. Henry Phipp's deed of gift of one million dollars for building improved tenements in New York City. The tenements are expected to earn about four per cent. on their cost, after allowing a proper amount for maintenance and repairs; these earnings are intended to accumulate and be used from time to time in erecting more tenements. The rooms should not be rented at a rate below the market price; for it is not desired to discourage the building and renting of tenements by others on a purely business basis: building operations might thus be checked, rents raised and injury worked in the end to the poor. In these model tenements there should be all the light and air possible; they should be fire-proof and thoroughly sanitary, with as much air-space as possible around them for children to play in; there should be light in every room, proper sanitation and ventilation, steam heat, a gas range and a toilet to every apartment. Mr. Phipp's first tenement was designed to have two, three and four room apartments, with bathrooms only for the four room suites, for the others there are tub and shower baths in the basement, one for every six families.

Such is the general character of the model tenement which other people of means have been invited to duplicate, the altogether sane and wholesome sentiment "philanthropy with four per cent. being urged to this end." Yet the model tenement for the poor has been by no means an unqualified success and for a complexity of reasons, one of which seems to be that some charitable builders are not content with the four per cent. In the metropolis and elsewhere in the United States the model tenement does not house the poor; and the Honorable James Bryce is recently reported to have declared that in London the poor are not able to afford living in them. The average model tenement tenancy in New York City, according to the architect, Mr. Henry Atterbury Smith, are "settlement workers, social investigators, writers, artists, professional men and women, several comfortably well off families of laboring men, some trades people and a good many young bachelors who keep garages and things like that."

Several metropolitan organizations—the Tenements Economies Society, the Charity Organization Society, the Pediatric section of the New York Academy of Medicine, and others—have been seeking to discover how the model tenement can be so "economized" that it will house the really poor; to this two things are considered necessary: a change in the present tenement law for New York City, which will admit of economic "open stair construction"; and the model tenement, hitherto simply an experiment in philanthropy, must be commercialized and placed upon a paying basis.

The model tenements in New York City have thus far been merely models, very beautiful ones some of them, such as the Vanderbilt tenements for sufferers from tuberculosis; probably nowhere else in the world are there more comfortable and sanitary tenements than the latter. The families of the very poor in this vicinity of these buildings have admired them immensely—and have perforce gone on living in dark and ill-ventilated apartments, where healthy existence was impossible. They have simply not been able to afford the Vanderbilt rents, nor those of the Open Stair Tenement, of the City and Suburban Homes Company,

nor the Phipps rents nor any other "model" rents on Manhattan Island. Built as honest efforts in philanthropy, they are all too costly for the people the philanthropists have meant to help.

"We need," declared Prof. Charles F. Chandler, the President of the Tenement Economies Society "a tenement that it pays someone to build, with all the necessities of fresh air, privacy, light and space, and with low enough rents for the poor to live in it; a structure that is up to date in all its sanitary arrangements, in all the fire-proofing equipments and in all its moral requirements which will furnish homes for families with the most moderate means, and at the same time yield a fair return to the owners on their investment."

MONGRELIZED RACES.

Dr Eliot, of Harvard, spoke recently of the changes immigration has wrought in the industrials, family life, and civilization generally of Massachusetts; he fears a great political evil in the lack of homogeneity now obtaining in that population. Not in a century may it become homogeneous if ever at all.

In his youth his community was homogeneous. His father's servants, the men who worked the farm, the mechanics and all the servants at Harvard, were Americans, descended from pilgrim stock—all except a decent Irishman who worked about Cambridge. Marvelous! only one Celt to a whole American community. *Tempora mutantur.* The puzzle to-day would be to find a single Puritan in a Hibernized (though far from hibernating) community. Dr. Eliot emphasized that there was in his boyhood but one racial element and seems to deplore our present day mixture. Yet we may, like honest Touchstone, thank the gods for our race mixtures, trusting that homogeneity may come hereafter. The point to emphasize is that those superb Puritans of Dr. Eliot's youth were themselves not at all pure—that is, ethnically. There has never been since Homer, nor probably many thousands of years before the blind bard, a pure race; and providential it is that this has been so.

The English who supplanted the aboriginal Indians (themselves in all probability not a pure race) were by no means a pure type; nor were the Dutch nor the French nor the Spaniards. Take the Frenchman of to-day. In the North are the descendents of the Belgae, the Walloons and other Kymri; in the East those of Germans and Burgundians; in the West Normans; in the centre Celts, who at the same epoch when their name took its origin consisted of foreigners of various ancestry and of the aborigines; in the South were ancient Aquitanians and Besques; without mentioning a host of settlers like the Saracens; the Tectasages, who have kept at Toulouse the custom of cranial deformities; and the traders who passed through the Phocaean town of Marseilles.

Professor Boas, of Columbia, has found that when the ratio of races intermingling is as one to nine there will be among the more numerous population only 18 to 1,000 in the fourth generation that will be of pure blood; and where two types intermarry with equal freedom, less than one person in 10,000 in the fourth generation will be of pure descent; that is, within a century the process of intermixture in this nation should be complete—homogeneity achieved!

A mixed race become homogeneous is as nearly perfect as a human race can be; and the more elements that enter the mixture the nearer will the ideal be approached. Is the reader not convinced? Look then on one of the recent pictorial pages of the *Sunday Times.* One sees here the photographs of the adorable "snow baby," taken during her first summer in Greenland; and so through the various eras of her existence to the culminating portrait of Miss Marie Ahnighito Peary. Here is a triumph of natural eugenics that has delighted the eye of every young fellow—and of at least one old fellow—that has had the good fortune to contemplate it. Four races have been the blessed heredity of this most winsome gentlewoman; for her father, Admiral Peary, is of English and French descent; and her mother is of German and Russian forbears.

A HOLY WAR.

WARS as ordinarily fought in civilization are in all conscience dreadful enough; never have they been more so than when from time to time they have been fought in the near East. Torture and killing of prisoners, massacre of inoffending non-belligerents, ravishing of women, slaughter of infants—such are the accompaniments which make the dictum "war is hell" seem tame. After observing "people sometimes talk of bestial cruelty, but that's a great insult and injustice to the beasts; a beast can never be so cruel as a man, so artistically cruel." Fyodor Dostoevsky writes down something as depressing as has ever been conceived in literature: "Here is another scene that I thought very interesting. Imagine a trembling mother with her baby in her arms, a circle of invading Turks around her. They've planned a diversion; they pet the baby, laugh to make it laugh. They succeed, the baby laughs. At that moment a Turk points a pistol four inches from the baby's face. The baby laughs with glee, holds its little hands to the pistol and he pulls the trigger in the baby's face and blows out its brains. Artistic wasn't it?"*

The perpetration of such horrors seems possible only to the Oriental, exotic temperament and only in a semitropic environment, but one must not lose sight here of the part (not only in the East but in all civilization as well) which has been played by perverted religious sense. Herein is why no informed man, however calloused, could have thought with equanimity that a "holy war" might have arisen out of the Bulgar-Turkish struggle; for by comparison with such a war of religion an ordinary conflict between armed men would seem like the fist fight of a couple of school boys. For example, our Civil War was fought for principles in which there was no issue as to religion. The conflict having been ended, rancour almost entirely ceased. Immediately upon Grant and Lee having agreed at Appomatox, Yank made fraternal share of what he had to eat and drink and smoke with erstwhile Johnny Reb. Recall now, by way of contrast, wars in which questions of religion were paramount. When the first crusaders entered Jerusalem, the Holy City, in which was the tomb of the Savior of Mankind, the ghastliest things were done, all in the name of the gentle Christ and every man bearing on his breast the emblem of the Cross. The character of the European Wars of religion in the Middle Ages—all fought to the glory of the Prince of Peace—were horrible in the way familiar to every reader of history; we need mention only St. Bartholomew, the Sicilian Vespers, the Albigenses, the Thirty Years' War, and the butcheries in the Netherlands of Alva, instigated by his fanatic master, Philip of Spain.

How can an influence intrinsically so merciful, an emotion so benignant in its essence as religion, become so perverted? Psychiatry and modern psychology assist us in a comprehension and an explanation. Religion, the instinct for reproduction, and the will-to-live are primitive basic human motives—the most primitive of all; such faculties as altruism, reason, judgment, sober and right thinking, moderation, self-poise, are of progressively later development in human evolution. These latter faculties, so painfully matured throughout the ages, are dethroned from their supremacy in the encephalon whenever passion and racial hatreds gain the mastery over the individual; then are the primordial motives predominant, and sadly changed, because unrestrained. So that now must be expected extremest fanaticism, lust and inordinate cruelty, either co-active or mutually interchangeable in their demoniac courses.

*The Brothers Karamazor.

ORIGINAL ARTICLES.

MEASLES AND SCARLET FEVER.*

How These Diseases Are Spread and How Their Spread May Be Prevented.

By Charles Herrman, M.D.

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If I correctly understand the purpose of these lectures it is to teach the public how to remain in good health and how to prevent disease. I shall, therefore, say very little with regard to the signs and symptoms of these diseases but shall emphasize the manner in which they are spread. I do not believe in giving instruction which will encourage mothers to make their own diagnosis of the disease. If a child is sick a physician should be consulted. A little knowledge is often a dangerous thing. Some of you may have heard of the doctor who was leaving his office in a great hurry. His wife asked him what was the matter. To this the doctor answered that Mrs. Brown had sent for him to see her boy. "I don't know what is the matter," he said, "but Mrs. Brown has a book on 'What to do before the doctor arrives,' and I must hurry up and get there before she does it."

Whatever my shortcomings may be in other respects, I have at least the advantage that I can speak from personal experience, having been a medical inspector in the New York Department of Health for over twelve years. I had an unusual opportunity to study the contagious diseases of childhood as they occurred in public schools and tenement houses and it is in these that the diseases are most frequently spread.

The subject is an important one. From 13,000 to 40,000 cases of measles with an average of 27,000 have been reported annually to the New York Department of Health during the last 10 years, and this by no means represents the total number occurring, as many cases are not reported. Of scarlet fever, 8,000 to 25,000 with an average of 15,000 have been reported annually. Nearly 1,000 deaths from each of these diseases have occurred annually during the last 10 years. Measles is usually considered a mild disease, but any disease which causes one thousand deaths annually in one city is by no means mild. Add to this the large number of complications following these diseases with the more or less permanent injury to the ears, lungs and kidneys, and you will appreciate that the subject is well worthy of our serious consideration.

I believe you will all agree that in order to successfully fight an enemy we must know how and where he is going to attack us. We must not waste our ammunition. Our medical, like our religious beliefs are, to a certain extent, inherited. Tradition plays an important rôle. Views are handed down from one generation to another. Some of these beliefs are so deep rooted that they are extremely difficult to eradicate. We should remember that it is much more important to know how these diseases are *usually* spread than how they may be *occasionally* spread. We hear many weird but interesting tales of how a child wore a coat of another who had scarlet fever, became infected and died. Such tales are apt to make a lasting impression. Though it is not necessary to say that such a thing is absolutely impossible, it may be safely said that if it ever occurred it must be *exceedingly rare.*

The theory that these diseases were "air borne" was one which, until recently, was pretty generally accepted. Those people who believed this in its most exaggerated form would close all their windows if a case of scarlet fever occurred in a neighboring house, they would go a block out of their way in order to avoid going through a street in which a case was known to be. Evidence is constantly accumulating which tends to show that at least in its original form this theory is untenable. Some years ago when I was in Vienna, groups of students regularly accompanied the professor in making rounds through the wards occupied by children suffering from these contagious diseases. There never was any evidence to show that they were ever infected by *inhaling the air* of these rooms. It has also been shown that if direct contact of the children is prevented by keeping them in bed and by separating the beds by partitions infection does not take place providing certain precautions are taken by the

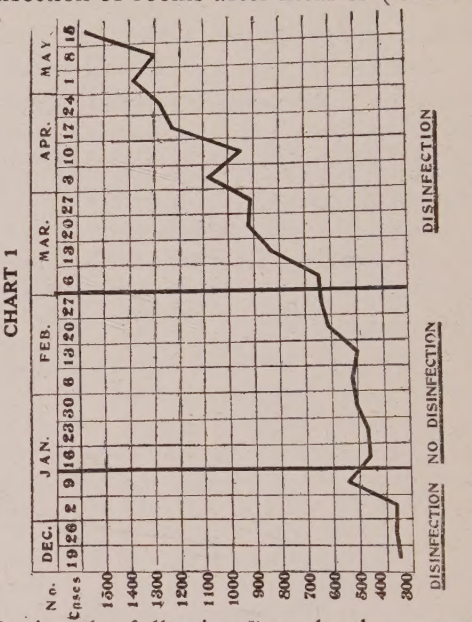
*A lecture delivered on January 28, 1914, as one of the course of Free Lectures on Health and Hygiene given under the auspices of the Social Service Department of the Lebanon Hospital.

nurse. This would not be the case were it possible for the infectious material to float in the air and descend into the neighboring beds. By the use of such partitions we prevent the direct contact of patients and the possibility of the nasal or aural discharges of the one coming in contact with the mucous membranes of the others.

A second way in which the infectious material was supposed to be carried was by means of what is known technically as "fomites"—that is, articles of clothing, bedding, etc., which had come in contact with the affected individual. In no disease did this seem more certain than in yellow fever and still it has been conclusively demonstrated that the disease is not spread in this way. Men have slept in beds previously occupied by yellow fever patients—the bedding linen not having been changed—and have not contracted the disease. It has been shown that the infectious material is carried by a certain variety of mosquito. For a long time Egyptian rags were supposed to be especially dangerous in their possibility of conveying contagious diseases, but a thorough investigation by Dr. Doty, then medical officer of the Port of New York, showed that such was not the case. I am also able to cite a personal experience. A member of my own family was for many years in the woollen rags business in which hundreds of young women were employed in sorting these rags, which included all kinds of wearing apparel some of which was undoubtedly worn by persons having contagious diseases. These rags were not fumigated or cleaned, nevertheless, there never was any reason to suppose that any of these women were infected.

The third supposed source of danger was the rooms vacated by persons having a contagious disease. One of the most frequently cited examples to prove this danger is that of Brouardel. During eleven years 23 clerks contracted tuberculosis in one office. But why assume that the room was responsible? Is it not far more probable that one tuberculous individual infected another by contact, that is through carelessness in coughing or in the disposal of the sputum? *Persons* not *things,* are the chief offenders and the principal source of danger.

On the assumption that rooms harbored the infectious material the value of *disinfection* was naturally very much overrated. The cost of disinfection in a large city like New York was considerable, approximately $55,000 annually, of which about $22,000 was required for disinfection after measles. In January, 1909, the Department of Health of the City of New York discontinued disinfection of rooms after measles (Chart 1).



During the following 7 weeks there was no marked rise in the number of cases but such an outcry arose from the Borough of Brooklyn that the Department was forced to resume disinfection. The number of cases increased as is always the case when the disease is epidemic, entirely unaffected by disinfection. During the last year disinfection after measles has been abolished and there has been no appreciable increase in the number of cases as against previous years. The manufacturers of disinfectants naturally wish to sell their wares and make all kinds of exaggerated claims as to their value. I remember distinctly the time when, if a case of malaria or diphtheria occurred in a family, a plumber was immediately sent for. Defective plumbing and sewer gas were held accountable. The purveyors of disinfectants have taken advantage of these old beliefs which are now known to be without foundation, and advise pouring their solutions into the sinks, pipes and cellars. Exposed vessels containing these solutions and sheets saturated with them are of no value. Possibly a red sheet (especially appropriate in scarlet fever) would be valuable as indicating danger to persons about to enter the room occupied by the patient. However the principal objection to the use of disinfectants is that they give a false sense of security and as a result many important precautions are not taken.

The desquamation or peeling of the skin in measles has **not** been considered dangerous,—but that **of** scarlet fever has always been so considered. This is entirely without scientific proof. Experimentally the scales have never produced the disease. In the children's ward of the Lebanon Hospital we have had a number of children with disease of the kidney following scarlet fever. Some of these were still in the stage of desquamation, but no other child in the ward contracted the disease. If such patients are free from discharges from the throat, nose and ears the danger is nil. That the peeling of the skin is not responsible for the spread of the disease is shown by the fact that the scarlet fever patients are not discharged from the hospital until there is absolutely no sign of peeling. These patients return to their homes and occasionally in a few days another member of the family is infected. On investigation it is usually found that the hospital case still has a discharge from the nose or ears. In the tenements I have frequently seen the brothers and sisters of the patient convalescent from scarlet fever helping him pull off the loose skin and providing there were no nasal or aural complications such children were never infected.

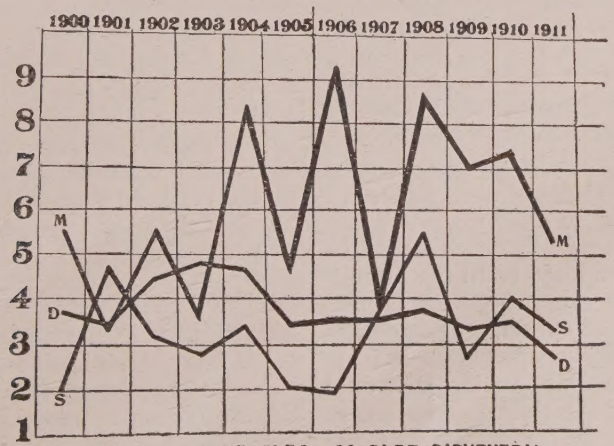
The most dangerous patients are not those with a straightforward attack of these diseases. These are easily recognized and isolated, but the very mild cases are frequently unrecognized. These so-called "carriers," individuals who harbor the infectious material in their nose or throat, go about innocently infecting others. By referring to Chart 2, it will be seen that though the number of deaths from measles and scarlet fever had been decidedly reduced the prevalence of these diseases is as great as ever. In the case of diphtheria, however, both the death rate and the morbidity have been reduced owing chiefly to the use of diphtheritic anti-toxin for prophylactic and curative treatment. One of the chief reasons why it is so difficult to prevent the spread of measles is that the disease is highly contagious at a time when it is usually not yet recognized, that is before the eruption appears. The child sneezes and coughs and is for the time being a "carrier" and in sneezing and coughing, infects all the children in the immediate vicinity. It is this direct close contact of children which is so dangerous and so difficult to prevent. Some years ago I made an investigation in two large public schools of the number of pupils who had pocket handkerchiefs and found that about 25 per cent. were so provided. But it must be remembered that not all who had them used them regularly by placing them before their mouth or nose in coughing and sneezing. I think it would be well to teach all children, even the youngest, to do this and to provide those who cannot afford to buy linen handkerchiefs with those made of paper. It is a significant fact that the diseases which are most contagious, namely, measles, whooping-cough and in-

CHART 2

RATE OF MORBIDITY PER 1000 POPULATION.

MEASLES. —— SCARLET FEVER. —— DIPHTHERIA. ——

NEW YORK CITY. 1900–1911



	MEASLES.	SCARLET.	DIPHTHERIA.
1900–1905.	5.1	3.0	4.0
1906–1911.	6.9	3.5	3.4

fluenza, are regularly associated with sneezing or coughing.

Measles is a very contagious disease; scarlet fever is much less so. Measles is not usually a dangerous disease for children of the school age, but *it is dangerous* for infants. It is, therefore, not advisable purposely to expose children to it. It is not absolutely necessary for all children to be infected at some time. The usual argument is that as they must contract the disease sooner or later it is better for the children to have it before it interferes with their attendance at school. However, we never know in advance whether the disease will run a mild or severe course. Complications may arise, especially in weak children, and in those predisposed to tuberculosis. Scarlet fever is a treacherous disease. A case may be apparently mild and suddenly become severe. Its complications are frequently serious. A mild case may give rise to a severe one. The public schools have often been held responsible for the spread of scarlet fever. At least as far as the City of New York is concerned my own experience and observation does not confirm this. As a medical school inspector I have watched epidemics and have never found a large number of cases within a short time in the children of one class-room. My investigations have shown that the disease spreads to other children living in the same tenement, to playmates and to members of the same family. The seasonal incidence of the disease shows that though the schools open before the middle of September there is no distinct increase in the number of cases of scarlet fever until December. The Christmas holidays have apparently no effect, the number continuing to increase at that time. In May and June, before the schools close, there is a marked diminution in the number of cases and the small number during July, August and September is simply a continuation of this decrease.

Second attacks of measles and scarlet fever are rare. Frequently an attack of German measles is so diagnosed. After an undoubted attack of measles it would be well to obtain a certificate from the attending physician in the same way as it is now obtained after vaccination. If another member of the family contracted the disease at some later date this certificate would make it possible for the child to continue at school. Now that the regulations of the Department of Health of the City of New York are much less strict, there is no reason why all cases of measles and scarlet fever should not be reported. It was formerly not uncommon for parents to request their attending physician not to report such cases because the other children of the family would be compelled to stay at home.

The length of time which a patient with scarlet fever should be isolated varies in different cases and it is very difficult to give a definite number of weeks. Very mild cases might often be safely allowed to mingle with others at the end of three weeks whereas others with nasal or aural discharges might require a separation of several months. The Department must of necessity err on the side of safety and in uncomplicated cases requires isolation of five weeks.

A few words with regard to *treatment*. The patient's room should be separated as much as possible from the remaining rooms and there should be as little as possible in it. There should be plenty of air and light. During the first day or two of measles the eyes are sensitive and it may be necessary to prevent the sunlight from shining directly into the patient's eyes, but it is not necessary to have the room pitch dark. Such a gloomy room only tends to depress the child. We are beginning to appreciate the beneficial effect on the patient of cheerful surroundings and are preventing everything that tends to cause him discomfort. In these cases good nursing is more important than drugs. Do not be afraid of fresh air or cool water, both are necessary. The eyes, nose, mouth and throat should be kept clean. Adenoids, enlarged tonsils and carious teeth predispose to complications in the neighborhood of these parts. No visitors should be allowed in the room. The nose and throat as well as the hands of the nurse should be cleansed regularly.

As to whether home or hospital treatment is the better, I should say that if the patient can be properly isolated and can have a physician and nurse by all means keep him at home. The chief objections to hospital care are that the nurse must take care of at least a half a dozen patients, in the time of an epidemic, and when the wards are overcrowded many more; mild cases are frequently kept in the same ward with severe cases with complications. Children admitted with one disease frequently contract another. However, where the people are poor and have a number of other children, and where isolation is impossible the patient should be sent to the hospital.

MISTAKEN IDEAS ABOUT THE SKIN.

By William S. Gottheil, M. D., Attending Dermatologist to the Lebanon Hospital, New York.*

The late Colonel Ingersoll was fond of lecturing on the "Mistakes of Moses," which always struck me as a rather unjust and misleading title, since with all the changes and advancements of some thousands of years of human progress, the Truths of Moses are far more noteworthy than his errors. I trust that the title of this talk will be open to no such criticism; the danger of which I hasten to forestall by admitting that, on the whole, we take care of our skins fairly well. If we subjected the outer covering of our bodies to influences similar, for instance, to those that we cause our digestive apparatus to submit to at this holiday period of the year, a large portion of this audience would appear here swathed in bandages.

In a general way civilization has brought with it improvement in the care of our integument; but this improvement has been by no means a steady progression. The immediate ancestors of the North European races paid but little attention either to the hygienic or the aesthetic aspects of the case; being in this as in many other respects far behind the Greeks and Romans, whose elaborate aqueducts and public baths, as well as the detailed instructions as to the care of the skin, hair and nails, have survived as evidences of their advanced civilization in this respect. The knight of chivalry and the troubadour of romance were probably evident to the sense of smell as well as to those of sight and hearing when approached, disguised though their natural odors were by strong scents; and the condition of people of the ordinary kind, bathing rarely or not at all, with underclothing that was worn until it fell apart and leather outer clothing worn for a generation and possibly inherited, can be better imagined than described. It reminds one of the bon mot of the Frenchman, who defined l'esprit du peuple as the odor of sweat and old clothes.

We have advanced far since those days; and if I call attention to certain errors that seem still to persist, and which stand in the way of further hygienic and aesthetic progress in this direction, it is in no carping spirit. And it is to the female portion of my audience more especially that my remarks will be addressed. Half of our human beings are females; and to this half the care of at least another quarter of humanity, our children, is confided. Their field is therefore larger, their opportunities greater, and their responsibilities more serious, in this respect, than those of the males. And the female portion of humanity is conservative; it clings to the old, the known, and the tried. This conservatism is most marked, naturally, in those functions, duties, and occupations which inevitably fall to their lot,—childbearing, the rearing and education of children, the kitchen, etc. If any of my masculine hearers have ever attempted to introduce an innovation, mechanical or other, into any of the departments of his household, he will understand what I mean.

Naturally, the first subject that I touch upon is that of cleanliness, the use of soap and water on the skin and its appendages. Some curious ideas are prevalent on this subject. Many hold the use of water, more especially of hot water, to be weakening; others believe that mere immersion, even in salt water, is cleansing; and others again object to the use of soap, especially on the face, as irritating and undesirable. None of these are really the case.

A general hot bath at least twice a week, with plenty of a good bland soap, is a necessity in our cities, where our body surfaces receive not only the influences of the dead surface cells that are continuously being cast off of the secretions from the vari-

* A lecture delivered under the anspices of the Social Service Department of the Lebanon Hospital.

ous skin glands that so readily decompose, but also the soot, bacteria, and all manner of impurities that are constantly present in the atmosphere that surrounds us. I myself am enthusiastically in favor of a daily warm bath, and advise its use wherever circumstances permit. This need not be very hot, and should not be prolonged; it is not enervating, but the reverse; and if followed by a cool or cold sponge or shower may be a direct tonic and stimulant. No skin that is healthy to begin with will be hurt by the frequent or even daily use of a bland soap, especially a glycerin soap. It is true that there are rare cases in which bathing causes itching and irritation; very often these can be relieved by the use of a little bland oil, such as almond oil, after the bath; if this does not do so, these individuals are suffering from a distinct disease of the skin, which needs skilled attention.

This leads me directly to the subject of the care of the hair, in so far as cleanliness is concerned. When we remember that some of the largest sebaceous and sweat glands in the body are directly connected with the hair, and pour out their secretions onto and around their shafts; that the oily meshwork of hair is a sieve that filters out from the atmosphere all the extraneous matter that it contains, that combing and brushing will not remove this matter, one would suppose that it would be worn as short and washed as often as possible. "Where there is hair there is dirt," as the Prussian martinet said when he ordered all his soldiers to have their hair cropped as closely as possible. Now, of course, I am aware that women must wear their hair long, and as long as possible, and I also know that washing long hair is a tedious and troublesome process. Nevertheless, these things are no valid excuse for the custom of most women in this respect. I believe that once a month is a high general average of frequency; and that in many instances it is done only once in six weeks or two months, or even only once or twice during the winter. This is absolutely insufficient, both from a hygienic and an aesthetic point of view. Once a week is desirable, and once in two weeks the least that should be employed. A good soap should be used; and if, after the shampoo, the hair remains too long unmanageable, there is no objection to the employment on the scalp of a very little oil or white vaseline. And another most important object is subserved by a more frequent washing of the scalp and hair. Insidious scalp affections that finally lead to that thinning and loss of hair which so commonly troubles women in later adult life can be largely obviated in their effects by frequent washing.

SOAPS AND FACE POWDER.

This leads me directly to the consideration of what is called "dandruff," usually dismissed as a trivial discomfort. Of itself, certainly it does not amount to much; you may have it for years without suffering more than occasional itchiness and the untidiness occasioned by the constant falling of the white scales. But when finally your hair begins to get thin on top of the scalp, and the hair line begins to recede on the forehead, you commence to realize the fact that dandruff is a symptom of an insidious disease of the scalp, which finally causes shrinkage and disappearance of the hair roots themselves. Almost every case of slow and general falling of the hair is due to this affection; it is mildly contagious, and is doubtless transferred from one person to another by the fingers of barbers, haircutters, and massage artists. It may be held in abeyance, and its final effects prevented for many years by cleanliness and the frequent use of soap and water; but the right course to pursue is to recognize the fact that it is a symptom of disease, and to have it treated and cured. This can always be done, and the hair can be stimulated to renewed and vigorous growth if the process has not gone too far. When all the tissues of the scalp have become atrophied from the long continuance of the disease; when the skin covering the head is tight drawn, smooth, and shiny, all the hair roots have disappeared, and no power on earth can put them back again. It is evident from what I have said that all the so-called hair tonics, hair renewers, and hair growers are delusions and frauds; and that the practice of scalp massage by barbers and others is not a means of avoiding baldness and promoting hair growth, but rather the reverse. In most cases it directly promotes the trouble that is at the bottom of the condition.

A few words now about that common affection of the skin of the face that may be classed as "pimples," and which the doctors call acne in its various forms. Adolescents are most subject to it, though it sometimes persists to middle life. Most people, and I am sorry to say, many doctors

would dismiss this affection as unworthy of serious consideration; yet it is always unpleasant and disfiguring, and bad cases, occurring as they do so frequently in young girls, may be a very serious cause of unhappiness. The common idea that it is due to "impurities of the blood" has no basis that we know of; it is due, in the great majority of cases, to local infections of the overactive skin glands with the pus organisms that are always round about us. Hence the uselessness of taking internal medicines, blood-purifiers, sarsaparilla, and any of the thousand and one remedies that are advertised for its cure. Careful and persistent local treatment and hygiene of the skin is the only effectual remedy for it; everything else, including internal treatment and the use of vaccines, is in my experience a delusion and a snare. Not that I would be understood as saying that internal conditions are entirely without influence upon the disease. The excessive use of sweets or acids, chronic gastro-intestinal disturbances, anaemia and chlorosis, and other general disorders, may aggravate acne by throwing increased strain on the eliminating functions of the sebaceous glands of the skin. But in its essence the disease is due to external infection; and it can be cured and is being cured every day by those who recognize this fact.

Closely allied to this subject is that of abnormal hair growth on the face; again a condition which in bad cases and especially in young girls amounts to a misfortune, and is well worthy of our attention; and here again also the commonly recommended and advertised remedies are efficient only for increasing the manufacturers' income. Depilatories of all kinds are but little better than shaving, and not so good as pulling out the hairs; in every case the hair root remains, and renewed hair growth quickly occurs. Two remedies, and two remedies only are at our disposal for this distressing affection; one is uncertain and not free from danger, and the other is tedious, slow, but effective and permanent. I refer to the use of the X-ray and that of the electrolytic needle. The latter is the one to be employed by preference; in the hands of an expert it is safe, painless, non-deforming, and sure. But I would emphasize the word "expert." The process is a delicate one, and to be performed surely and safely it must be done by one well acquainted with the anatomy of the parts and with powers of the instruments employed. I have seen the most unsatisfactory results, no real destruction of the hair roots and bad scarring of the face, from non-professional work of this kind. In the proper hands electrolysis is perfectly successful, very little painful, and leaves the face entirely unmarked. It is applicable to all vigorous hair, save perhaps that occurring on the upper lip. Lighter downy hair can only be removed by the X-ray; and here I speak with some hesitation. The process has its distinct and serious dangers, and should only be used by the medical expert. It is my custom to advise non-interference with growths of downy hair, unless it is very abundant; and I use the X-ray only in very marked cases, and with the distinct understanding on the patient's part of the difficulties and dangers involved in the process.

And now I cannot better conclude these rather desultory remarks than by emphasizing the fact that of all the mistakes we are liable to make about the skin perhaps the worst is to rely on advertised remedies and cures. I know that I lay myself open to the charge of self interest; but I am quite willing to bear that burden. When we remember that our integument is a very extensive, complicated and vital organ; that the number of recognized and distinct diseases to which it is subject goes up into the hundreds; varying in seriousness from trivial discomfort and disfigurement to fatality; that multitudes of men all over the world are devoting their lives to the study; we must admit the fatuity of the patient's diagnosing his own case, the futility of an application that is a cureall, and the inefficiency of commercial "institutes" to do the work of scientific diagnosis and rational treatment. Years ago I was connected with a medical institution that was situated a block away from a so-called dermatological institute; and this institution supplied our dermatological department with a constant stream of patients. We in the profession must take some of the blame at least on our shoulders if advertised cureall remedies still have vogue, and beauty parlors and der-

matological institutes still have multitudes of patrons. We have been too prone to dismiss cases of acne and similar ailments with the dictum of "over-acidity of the blood" and an internal remedy, or to prescribe poslam or unguentine or some other unknown but easy external application. Meantime it is our duty, who know better, to point out to the public the dangers of insufficient diagnosis and inefficient treatment, and to indicate to them at all events, the way which they should go.

A POSSIBLE CANCER CURE.

THE cancer situation suggests the inexorable law of compensation upon which Emerson dwelt. The medical profession, with its humanitarian allies, has in recent years fought with much success tuberculosis, the veritable Captain of the Men of Death, and has notably reduced the percentage of his victims. The cancer mortality seems *pari passu* to have undergone a reciprocal increase. Young people do not now die so much of tuberculosis—that disease of adolescence and early middle life; they live rather to succumb in later years to cancer.

The law of compensation again asserts itself in that, whilst tuberculosis destroys mostly civilization's submerged strata—the exhausted in body and soul, the wretched, the starved, the physically-degraded; cancer, on the other hand, does its gleaning rather among the well-to-do in life, those who have never felt the stress of poverty, those accustomed to sanitary and eupeptic existence. In London, for example, the greatest mortality is not in the East End, in "Darkest London," but in Hampstead, Marylebone and Chelsea, which are of that city's wealthiest vicinities. In New York the crowded tenements are comparatively immune; whereas cancer evidences its preference for the more healthful and the better-to-do parts of the metropolis.

Indeed salubrious, "good-living" conditions would, strangely enough, seem for cancer a congenial and fruitful environment. Cancer and gout, one would think, drive tandem. Patrician cancer has a predilection for the homes of the prosperous, scorning those of the squalid and the miserable; it is comparatively infrequent (although of course it occurs) in prisons, workshops and insane asylums. Prostitutes rarely suffer; is this because these poor victims of the world's basest passions so seldom reach advanced age,—let alone middle life? Cancer loves a shining mark—it has a venomous penchant for the illustrious, those of great worldly importance, those whom communities and nationalities can ill spare, those who have, through many years of superb activity, fairly earned *otium cum dignitate,* a serene and respected old age.

How vital then should be a certain cure of cancer. Scientists devoted to the service of mankind have now for decades past been patiently and most zealously at work on cancer problems; and their efforts have been and are most nobly seconded by people able to provide the means by which such work can be done. Therapeutic measures have been devised, none of which can be said to be measurably successful. The knife has thus far afforded the cancer patient the most hope; yet recurrences after operation are pathetically frequent.

It is therefore with utmost gratification that one considers the application of chemotherapy to cancer (or carcinoma).

It is Ehrlich who formulated the principle of chemotherapy, upon which has thus far been based the treatment with "606" or salvarsan, a therapy positively curative of syphilis, one of the most dreadful of human diseases. In chemotherapy substances are found which have a greater affinity and toxicity for parasites or dis-

eased cells. Wassermann and his great associates have made application of this principle of chemotherapy in their experiments upon malignant tumors (cancer or carcinoma and sarcoma) in mice. We may not here consider the pathology of such tumors; it must be noted, however, that one finds *invariably* in these malignant growths "tumor cells," which are abnormal and are manifestly essential elements of the cancerous or the sarcomatous process. (Sarcoma is a malignant tumor even more virulent and more rapidly fatal than cancer.)

Wassermann has found that a compound of eosin and selenium, when in contact with malignant tumors in mice, is taken up selectively by the pathological tumor cells. Daily injection of this compound into the blood stream in these mice was found to cause within three days, a softening of the tumor; and its total resorption within ten days. For this result the tumor must not be too large in proportion to the body weight of the animal—in the mouse not beyond the size of a cherry. With larger tumors the drug would give severe, even fatal intoxications, apparently by reason of the rapid absorption of the products of disintegration of the tumor cells. In the recovered animals, after several months' observation, the tumors have totally disappeared, without any recurrence. Recurrence of the growth was found, however, when insufficient treatment had only partly destroyed the tumor.

Unquestionably this work of Wassermann and his associates, based upon the epochal principle of Ehrlich, justifies the hope of a cure of human cancer. Yet it is obviously imperative to observe also that we have here but the beginning of a long series of most arduous experiments, which must extend over years and which must, as of course it will, enlist the loyal and earnest co-operation of clinicians, chemists, pathologists and bacteriologists. Consider how Ehrlich was not satisfied, nor ready to give to the world until after his 606th experiment, salvarsan, a cure of a disease which unlike cancer, is in itself rarely fatal.

Nor can we too much laud this conservative statement of Wassermann's: "This merely establishes an essential scientific fact, namely, that the existing view that it may not be possible to have chemical substances specifically pass out of the vessels into a tumor and destroy it, is untenable. We wish most particularly, in order to prevent false hopes and excitement among persons with tumors, to emphatically point out that at the present time we have no evidence that this substance will act in the same way with human cancers. We have not yet investigated this question. It may well seem not impossible that an essential beginning has been made and a solid foundation established, extension of which along these lines may yield progress in human therapy."

THE OCCUPATIONAL DISEASES, THEIR CAUSATION, SYMPTOMS, TREATMENT AND PREVENTION, by W. Gilman Thompson, M. D., Prof. of Medicine, Cornell University Medical School, Visiting Physician to Bellevue Hospital, by D. Appleton & Co., New York and London, 1914.

WITH the advance of civilization many occupational diseases have progressively developed. And since Workingmen's Compensation Acts have been and are constantly being passed by State legislatures, the subject has become of the first importance to both physician and layman. Only an examination of such a work as this of Dr. Thompson will reveal the many and the dreadful dangers to life and health confronting the twentieth century workingman. Though many most valuable monographs have been published of recent years in the United States on occupational diseases, practically all the standard works of reference on this subject have been by English or Continental authorities. There has been no modern treatise on the subject by an American authority on industrial hygiene.

Professor Thompson's book is heartily recommended to physicians, scientists, economists, sociologists, humanitarians, men in insurance, legislators and clergymen for whom, though it could not furnish a text, it could nevertheless furnish many an idea for a sermon. There are 118 illustrations. The price is $6.00 net.

THE THERAPEUTIC VALUE OF FOOD IN DISEASE.—A GENERALIZED BIOCHEMIC STUDY OF NUTRITION.

By Theodore William Schaefer, M.D., Kansas City, Mo.

Continued from the June Number.

THE DIETETIC TREATMENT OF DISEASE BY MEANS OF PROPERLY SELECTED FOOD.

There are a number of constitutional diseases, known as nutritional disorders, that are dependent upon dietetic errors. It is a discouraging fact, however, that we do not know anything positive concerning the real pathogenesis of these diseases. Therapeutically we of necessity must treat these diseases empirically. Dietetically we have not yet made any great advancement in the treatment of these diseases, excepting in scorbutus and infantile scorbutus. Among the diseases that can be successfully managed and cured by dietary treatment alone scurvy affords us a striking example. The chief etiological factor of this disease is apparently an insufficiency of a particular kind of appropriate food—an unsuitable ogy of digestion as absolutely true. In redietary long continued, that is defective in the necessary constituents of tissue anabolism, the normal histogenesis being disturbed and altered by the absence of the essential potassium salts, present in fresh vegetables, that have been withheld as nutriment. In the rational treatment of this disease we employ the properly indicated food for the purpose of supplying nourishment and also providing the constituents that are necessary for the maintenance of the physiological processes of the body. Upon the institution of correct dietetic principles the disease known as scorbutus has been diminished more than 90 per cent. An antiscorbutic dietary—fruits and fresh vegetables, orange or lemon juice, meat juice and milk —successfully meets the chief therapeutic indications. Salt meat is not a cause of scurvy, except as excluding more nourishing and digestible food. The above mentioned aliments furnish the substances needed to supply the tissues that are defective of the necessary potassium salts. There are, of course, skeptics, like Fürst, for instance, who claim that neither ash nor any of the alkalies play a part in the incidence of the disease. Searching for a phantastical, mythical cause does not enrich our fund of knowledge! There are a few diseases which can be more promptly cured or, still better, prevented by judicious dietary and hygienic treatment, than scurvy. Infantile scorbutus, if brought under the proper regimen of an antiscorbutic dietary—mother's milk or fresh cow's milk, meat juice and orange juice—successfully meet the principal indications of treatment.

When an infant is fed on condensed milk, on boiled milk or on one of the proprietary foods, scurvy often develops. A wrong diet is the responsible and underlying cause of scorbutus. Since the introduction of the antiscorbutic dietary the number of cases of scurvy has vastly diminished.

Possibly the origin of many diseases is to be looked for in the long continued assimilation of defective and inappropriate food. Certain panepidemics have disappeared from the map of Europe. There certainly must be a cause for this. Diseases like smallpox and syphilis, for instance, have changed in their virulence and have become milder in recent times. The disappearance of that deadly pestilence of the fourteenth century, known as "black death" or Oriental plague, that terrorized and devastated Europe, has been attributed to the introduction of the potato as food, which, it is supposed, has favorably modified the system against the encroachments of this terrible disease.

Our improved mode of living, aided by the advanced methods of sanitation and hygiene, and, especially, more generous alimentation, chemo- and serum therapy, have undoubtedly a great deal to do with the lessened virulence and increased attenuation of these diseases.

DISEASES THAT ARE CAUSED BY A WRONG DIET.

As our knowledge of pathology increases there is no doubt that there are a number of other diseased conditions of the type of scurvy that are due to a wrong diet, whereby the body becomes defective in its protective constituents that are so essential to the maintenance of its chemical equilibrium and integrity. Among the diseases that respond to certain histogenetic elements, such as the preparations of the thyroid gland, is myxedema. The prime requisite in this disease is the administration of the thyroid gland and its extracts. It is possible to hold the symptoms under complete control by continuing the administration of the remedy throughout life. There is a wide field open for original research in the treatment of disease by means of ferments, secretions, serums, and toxalbumins, the chief object being, by means of organotherapeutics, to supply the body that suffers from a deficiency of certain constituents, with the proper normal material. The realization of such treatment would be an ideal one and the most satisfactory example of rational therapeutics. There is no question but what there are many forms of disease, whose pathology is doubtful or is supposed to be caused by infection alone, can be traced to inappropriate food. Indeed, many constitutional disorders are dependent upon dietetic errors. In a word, wrong diet furnishes the origin for a number of pathological disorders under the heading of food-infection and ptomain-poisoning. Without contaminated and infected food they are not possible. A continued food infection, caused by a slow introduction of toxins and toxalbumins present in food will lower the bodily vitality. It furnishes the pabulum by which a so-called inherited predisposition may develop into active disease as in the case of tuberculosis, which is primarily a local infection that becomes general after a while, etc. When the bodily resistance has been lowered it is no longer immune. The retention of foreign or noxious matter derivable from food is a real cause of disease. Some diseases have their origin in the constant accumulation of foreign matter in one part or another of the organism, and all the manifold pathological manifestations expressed by their presence serve merely to distinguish the different conditions arising from this common cause. It is obvious that the locality, nature and composition of these accumulations may give origin to the most kaleidoscopic symptoms. It is the conviction of many that the *fons et origo mali* of gout, arterio-sclerosis, chlorosis, appendicitis, diseases of the liver, the kidneys, the nervous system and many other obscure pathological conditions are to be looked for in perverted processes going on in the bowels, where disturbances have been caused by inappropriate food.

According to the physiologist, G. Bunge (Lehrbuch der physiologischen und pathologischen Chemie, 1894, p. 118-119), there is no organ of our body that is so much abused as the kidney. The stomach reacts when it is filled to excess. The kidneys must bear patiently every abuse. This ill-treatment is first recognized when it is too late to remove the ill effects of long continued abuse. Are our kidneys really adapted for the purpose of eliminating the unnecessarily large quantities of salt used in our food? By the assimilation of meat and bread without the addition of salt we eliminate not more than from 6 to 8 grammes of potassium salts from our body in 24 hours. By the ingestion of potatoes with the corresponding addition of common salt over 100 grammes of potassium salts are driven daily through the kidneys. Should there be no danger connected with this?

Bunge further directs attention to the fact how trifling the work of the kidneys is when rice is used as food. Only 2 grammes of potassium salts are eliminated in 24 hours. The superiority of rice over potatoes is evident from the fact that the majority of mankind—the Persians, the Hindus, the Chinese, and Japanese—have been nourished by it for thousands of years. Would it not be well to employ rice as a diet for those who have kidney troubles? The same is applicable to stomach diseases, because potassium salts irritate the mucous membrane of the stomach and rice is poorer in these salts than any other nutriment.

THE DELETERIOUS EFFECTS FROM THE CONSTANT INGESTION OF INSUFFICIENT AND INAPPROPRIATE FOOD.

It is the conviction of the writer that at the base of most of the varied pathologic manifestations a grave dietetic error is perpetrated in a long continued use of the same diet. This diet may be rich in proteid food, but is often poor in fats, fruits and fresh vegetables. The trouble appears to be that many persons, forced by circumstances due to economic reasons, persist in subsisting upon one kind of foodstuff for long periods of time that is wholly inadequate to completely nourish the body. It is evident that in the course of time a long continued use of such an irrational diet will seriously lower the opsonic index of the body. It loses its solidarity or density, as it lacks in the necessary and essential protective constituents and thus becomes more or less vulnerable and susceptible to disease.

The subject of nutrition has been studied in Europe for a long time. Most of our ideas on nutrition are from Germany. Alimentation materially influences the development of the animal as well as man. The matter of food supply is of particular importance to the population in general, especially the young children, among whom the diet should receive the very first attention. It should be highly nutritious and rational. Many children are literally fed to death on arrow root, tapioca and sago. These are not complete nutriments and are incapable of promoting the growth of either bones or flesh.

The ill effects of an improper feeding *en masse* has been noticed collectively in large charitable and other institutions of the state, which have become literally hotbeds of tuberculosis and other marantic diseases. Here verily a great crime is committed by the unscrupulous political office-holders who desire to conduct these institutions at a great personal profit.

A large number of school children belonging to the indigent, lower classes are undernourished from the constant ingestion of poor, inadequate food and many suffer from the consequences of a long continued malnutrition.

These underfed, undernourished children offer indeed very little resistance to any of the acute infectious diseases to which they may be exposed. They are liable, on account of their increased vulnerability, and also in some cases for reason of the great water content in their tissues, to succumb to the inroads of disease.

An adequate and healthy alimentation is also especially momentous in times of epidemics.

The chemistry of the human nutritive food material and food accessories is of great importance in times of famine, when it depends upon economizing with the supplies at hand and devises means and ends for producing proper food substitutes. A properly selected diet will save many patients and avoid a protracted convalescence in others. In surgical cases the question of diet is all important, as a nourishing and suitable diet has not a little to do with the speedy healing of wounds.

THE MILK FALLACY.

Mother's Milk is the Only Real Food for The Nursing Infant.

An infant needs relatively *more proteids* than fats and carbohydrates in order to build up its organism. The adult, however, needs relatively *less proteids* and relatively more fats and carbohydrates to keep the organism in a general bodily equilibrium. It is a very important fact that in the early period of life the infant does not possess a starch digesting enzyme. (König). Fat is not readily digested. Milk is the normal food for the infant and *not* for the adult!

It is, therefore, a great mistake to feed anemic and convalescent persons, who possess good bony structures, exclusively upon milk, in order to intensify the hemoglobin formation in the blood. It is a fact that milk is not rich in iron.

The so-called "milk cure" is, therefore, simply a starvation treatment. The supposed beneficial effects of milk treatment have not been realized by its enthusiastic advocates. It is a fact that an exclusive diet

on milk will cause anemia. Large quantities of milk should not be partaken of by persons with weak digestive organs as an evening meal, because it is likely to disturb the stomach during the sleep. A persistency of an exclusive diet upon milk causes finally a feeling of repugnance to its further use, as is perceived by the early appearance of symptoms of dyspepsia. A forced diet on milk is likely to cause anemia in the course of time, as milk is not a complete food for an adult person. It does not possess sufficient nutritive ingredients to sustain the adult body. In milk there are not enough carbohydrates for the sustenance of the average man.

But few physicians know and even realize the deleterious effects of a diet of milk in febrile diseases (typhoid fever) and inflammatory conditions of the stomach and intestines. Reasonable caution should, therefore, be exercised in its use in these affections. Over sixty per cent of milk, when ingested, passes as water through the emunctories.

Of the nutritive salts, which the growing body needs, are pre-eminently lime and iron. The nursing infant possesses the necessary supply of iron stored in its tissues and in the spleen, which it has received from its mother as the most valuable constituent for the development of the blood and muscles. The infant begins to receive its independent supply of iron after its period of nursing. For this reason mother's milk is not rich in iron; on the contrary, it is one of the nutriments that is poorest in iron. For reason of its great content of lime salts the milk subserves its most important mission in the building up of the bony framework.

The views of the authorities differ in respect to the digestive secretions of the nursing infant. Very little is known concerning the functions of the intestinal tract of the foetus, though it has been demonstrated that the stomach contains pepsin and rennin after the fifth month, their presence indicating a certain amount of glandular activity. In the infant the pancreas remains in an undeveloped condition for five or six months after birth, and the action, therefore, of its secretion is very feeble indeed.

"Grau ist jede Theorie!" says Goethe in his "Faust." Contrary to what we should infer from a priori reasoning the digestive tract of the infant is proportionately long, instead of being short in the suckling infant, notwithstanding the fact that its chief food is of a proteid nature.

The first scientific investigations of the intestinal tract of the infant were conducted by Schwan. He discovered the interesting fact that the length of the intestines as compared with the length of the body is considerably greater in the infant than in the adult. It is claimed that this corresponds to the relatively greater requirement of food. Orban and Weinland have lately studied the intestinal secretions. According to these authors, the secretion of the small intestine in the new born contains a ferment, lactose, which is capable of decomposing lactose. Moro and Jakubowitch, in contradiction to Korowin and Zweifel, affirmed that the pancreas secretion of the new born possesses a diastatic activity, which is small when compared with the lipolytic and proteolytic activity. (Dr. Frank Neff quoting Pfanndler and Schlossmar.) Under normal conditions, no residue of milk should be found in the faeces of a nursing infant, but the white flecks or clumps frequently seen, are, as would be expected, more often due to the presence of *fat* or *soaps* than to the presence of casein. Casein, however, if found in an infant's stool, is always pathological and appears in rounded clumps known as curds, which vary from a pin's head to a hazel-nut in size. These masses respond to protein reaction.

A recent statement points out the dangers from exposure to the various kinds of dust. There are three kinds: factory, house and street dusts. While among males generally in the registration area of the United States 14.5 per cent. of all deaths are from consumption, the mortality among grinders from this disease is 40.2 per cent. and in hardly any of the dusty trades is it below 25 per cent. The percentage of deaths from tuberculosis among all those exposed to metallic dust is 36.9 per cent; to mineral dust, 28.6 per cent.; to vegetable-fibre dust, 28.8 per cent.; to mixed animal and other forms of dust, 32.1 per cent.; to street dust, 25.5 per cent.; and to organic, or dust coming from the articles being manufactured, 23 per cent.

CORRESPONDENCE

A CORRESPONDENT asks how a diet of raw eggs, taken in large numbers "for the purpose of building up cases of a badly run-down condition, anemia, nervous exhaustion, etc., compares with the exclusive milk diet."

Neither is best as an exclusive diet for such conditions. The following is an appropriate dietary:

All foods that produce fat and blood, if easily digested. Thick soups, fish, raw oysters, small clams.

Meats, etc. Beef, chopped or scraped meat, mutton, chicken, game, butter.

Eggs. Raw, soft-boiled, poached and scrambled.

Bread and farinaceous articles. Any quantity, if there is no special contra-indication in the way of indigestion of this class.

Vegetables. All kinds of ripe and well cooked vegetables, such as potatoes, spinach, young peas, rice.

Desserts. Egg and milk puddings, ripe fruits.

Drinks and liquids. Pure water, warm fresh milk, cream, malt preparations, claret, burgundy, port, sherry, tea.

AVOID:

Pork, veal, salt meats (except ham), hashes, stews, thin soups, cooked oysters or clams, turkey, pickles and spices, pies, pastry and preserves, thick gravies and all made dishes, and anything found by experience to disagree.

Best of all, consult your physician.

A subscriber writes:

We physicians believe that we are, in straits that could not be worse. The prevailing dishonesty over the land! Physicians are *cheated* right and left! The other day I was called to a man who was injured in a bank (New England National Bank), the chief officer told men to go right ahead and treat the man and it would stand good for his treatment. Now the bank is using dilatory and evasive methods and refuses to pay me. To where are we drifting? Our government is based on the ideas of a Rousseau!

EXERCISE.

Exercise is nature's greatest corrective agent.

Exercise will prolong your productive years.

Exercise will prolong your life.

Exercise is necessary for health and *full* vigor.

Exercise is increasingly necessary as the brain works harder, the body begins to lag, and age makes its impression.

Exercise clears away the cobwebs, eliminates the poisons, and enriches the blood.

Exercise invigorates and increases efficiency.

Exercise prevents depreciation.

Exercise brings refreshing sleep.

Exercise improves the appetite and makes life worth living.

Exercise drives away the "Blues."

Exercise postpones sickness and failure.

You can postpone everything else except your Exercise.—DR WATSON L. SANGER, New York.

Sympathy is a composite photograph of humor and saintliness.

Man cannot be happy through science; but to-day he can much less be happy without it.—*Poincare.*

The science of happiness chiefly proves that the real happiness of the individual is joined with that of society. Personal happiness is never in conflict with social happiness so long as it allows itself to be guided by the true value of the principles of life. It is the conventional conception, elaborated through the centuries, regarding wealth, envy, the pleasures or the domination of men, which makes us seek objects contrary to social prosperity. The contradictions * * * between individual and social happiness are only apparent * * * chiefly due to a superannuated education whose conventional foundations have not changed for thousands of years.—*Finot.*

RURAL SANITATION.

SUMMER DIETARY.

THE Federal Department of Agriculture has adopted the most laudable policy of issuing, through its office of information, circulars of a practical and suggesting nature regarding hygiene and prophylaxis; especially timely is one on keeping food in the summer, to the end that the people of the country may avoid ingestion diseases. Watchfulness is especially essential in the summer by reason of the greater tendency of food to putrefaction, the greater bacteria multiplication, and the chemical changes in some foods which greatly lessen their nutritive value and oftentimes make them unfit for consumption. Unfortunately there is no rapid, absolute, simple and practical way of detecting such deleterious conditions—at least not for the family of average means. So the eyes and the nose must be largely relied on for the detection of bad food in hot weather; next after these taste must be the guide; and finally the fingers. An unusual odor or appearance should be decisive tests. And in boarding houses or restaurants one should be especially careful about meats cooked with a highly spiced or aromatic sauce, such as might disguise a bad taste or odor. Only sweet smelling, clean food should be eaten. Spotted, green, shiny or frothy raw meat, or meat soft here and there, must be avoided. A mother should examine any eatable carefully in a good light, smell it and then taste of it before letting her child eat it.

Milk, always a congenial culture medium for most bacteria becomes especially dangerous in summer, more than ever should it in that season be dispensed in sealed bottles. The milkman may serve a good milk which quickly, however, becomes stale and harmful if left standing by the housewife on a hot porch or stoop before it is put in the refrigerator. And all mothers, if there is any doubt of the purity of the milk they give their little children, should use some such contrivance as the Straus Home Pasteurizer, which can be had at almost nominal cost, with full directions for its use, at any Straus Laboratory.

All foods should be handled as little as possible and kept covered, wrapped or screened (18 meshes to the inch will keep out not only flies and other insects as well); and all vessels, pitchers, etc., in which food is to be stored should first be scalded. The ice box, especially its drain pipe, should be cleansed thoroughly and frequently with boiling water and washing soda; and this domestic essential should be given an occasional airing. Uncooked food should, in general terms, be avoided; nor should children be allowed to eat the skins of fruits, especially of such that have been exposed to insects or to street dirt.

Nor is everything in a summering place or a strange city necessarily pure and wholesome. There is much danger of typhoid fever in the country; many cases of this disease that are recorded in the fall in cities have had their origin in water, or milk, or contaminated food at some summer resort. If one is not absolutely sure of the reputation of springs, wells or tap water, boiled water should be insisted on. And any water carried from a source near an out house or a stable or in a neighborhood where fever is at all prevalent should be absolutely refused. The flat taste of boiled water can be obviated by putting it in scalded shallow, open pans and allowing it to stand for twenty-four hours where neither flies nor dirt can reach it; thus will its usual taste be restored.

The circular above referred to warns one especially not to believe that the label "Guaranteed under the Food and Drugs Act" on cans and packages means that the Government has tested these foods and pronounced them pure and desirable. The Government does not make the guarantee, which latter is made wholly by the manufacturer, "and means no more than when your own corner grocer guarantees that the sugar he weighs out for you is all right.

Examine goods labeled 'guaranteed' just as carefully as any other kind."

A judicious summer dietary would be inclusive of the following: Such easily assimilated fruits as grapes, oranges, lemons, rhubarb, peaches, cherries, berries, apples, pineapples, pears, melons (most of these have also a mildly laxative effect); clear soups; leafy or fibrous vegetables—tomato, celery, spinach, asparagus, lettuce, onions, beets; green salads—endive, chicory, romaine, watercress; fresh fish or game; roasted or broiled beef, mutton or lamb—but once daily; soft cooked eggs; milk or buttermilk or sour milk (to which latter sugar may be added), simple desserts as of gelatine, custard and ice cream. Heat-producing foods which should either be avoided or eaten in moderation are: thick soups; canned meats; spices and condiments; nuts, beans, oils, cheese, bananas, dates, preserves, candies, sweets. Alcoholics should in general be avoided; as also overripe or unripe fruits. Water moderately at meals but up to the utmost limit of one's thirst between meals.

A SONG FOR JUNE

Our purse, my dear, is flat
(It never yet was fat),
Our garments worn and sere
(They were the same last year),
And frugally we dine
(Who never craved for wine),
Admitting that,
O! why, my dear,
Repine?
The merry world's in tune,
And fruits and flowers thrive
And robins sing, like mad:
"Ho! it is June,
And we're alive;
Be glad!"

Here are we, still together
(And richer by the weather);
There's nothing we would borrow
(O! certainly not sorrow),
But just what Heaven lends us
(This blue sky that attends us).
Why care a feather
What the morrow
Sends us?
This golden afternoon
Bees buzz about the hive
And robins sing, like mad:
"Ho! it is June,
And we're alive;
Be glad!"

Green woodland pity heals the ancient scar;
Spring after spring, through still unresting years,
In little saplings and the tufted pine
The old trail disappears.

Forbidden pine and fernbrake come once more;
Brown leaves have hid the secret deep and well;
Only the scattered blaze-marks, blurred and dim,
A fading message tell.

One coming here might seek for it in vain;
There is no sign above the guarded gate
To point the path, to where the still wood keeps
Its heart inviolate.

The old path fades, forgotten; only guessed,
And scarcely found and once more lost again.
So record serves to show the long-healed wound
Of havoc and of pain.

God send all trails forgetfulness as this!
Such healing pity of the kindly years,
That no swift-footed memory may find
Lost places of old tears!

—*Arthur Ketchum, in Atlantic Monthly.*

You take pretty good care to keep your bank balance on the right side. How about your physical balance. Better assure that by being examined once a year.

An ounce of precaution is worth many pounds of regret.

AN EDITOR'S VANITY.

If an editor were found to be liable under the Income Tax law, he'd be so puffed up about it that he'd begin to refer to his chilblains as gout.—*Ohio State Journal.*

CONTAMINATED VEGETABLES.

Dr. R. H. Creel, in Public Health Reports No 72, discusses vegetables as a possible factor in the dissemination of typhoid fever. Plants cultivated in soil thus contaminated will take up on the leaves and stems. The typhoid bacillus was recovered from the tips of leaves apparently soil-free. Nor will rainfall free vegetables from infected material. The longevity of this germ ranges in water from 7 to 30 days and in soil from 60 to 70 days. The fertilization of ground by human excreta thus assumes a two-fold importance. When pollution of garden earth with infected material occurs not only may such vegetables as lettuce, radishes and celery directly convey infection, but the soil may serve as a reservoir for the bacteria, drainage from such areas seeming to maintain an infection in streams for much longer periods than if the infection of the stream were direct.

Of all the problems confronting the sanitation of this country in recent years few have received more attention than that of stream pollution. But in the consideration of the contamination resulting from the discharge of urban sewage, which is admittedly of paramount importance, that arising from a great and widespread rural population has been given less consideration than it deserves.

The practice of using human excreta as fertilizer is by no means as uncommon as is generally supposed, and without doubt will become more widespread unless this method of soil enrichment be curtailed by properly enforced laws. Although some emphasis has been laid on the fact that tips of vegetables examined were microscopically free from earth, the viability of the *Bacillus typhosus* on plants, and its longevity in soil, can be considered identical so far as the sanitary significance is concerned, for very seldom if ever is there seen in the market lettuce or celery free from dirt, and even in well-managed households and public eating places scrupulous care in preparing articles for the table is exceptional.

FERTILIZERS.

The kind of fertilizer employed has a marked influence upon the character and quality of the vegetables produced. For the garden only those fertilizers that have been carefully prepared should be used. Fertilizers of organic composition, such as barnyard manure, should have passed through the fermenting stage before being used. The use of night soil generally is not to be recommended, as its application, unless properly treated for the destruction of disease germs, may prove dangerous to health.

BARNYARD MANURE.

For garden crops there is no fertilizer that will compare with good, well-rotted barnyard manure. In localities where a supply of such manure can not be secured it will be necessary to depend upon commercial fertilizers, but the results are rarely so satisfactory. In selecting manure for the garden, care should be taken that it does not contain any element that will be injurious to the soil. An ecess of sawdust or shavings used as bedding will have a tendency to produce sourness in the soil. Chicken, pigeon, and sheep manures rank high as fertilizers, their value being somewhat greater than ordinary barnyard manures, and almost as great as some of the lower grades of commercial fertilizers. The manure from fowls is especially adapted for dropping in the hills or rows of plants.

COMMERCIAL FERTILIZERS.

Commercial fertilizers are sold under a guaranteed analysis, and generally at a price consistent with their fertilizing value. No definite rule can be given for the kind or quantity of fertilizer to be applied, as this varies with the crop and the land. At first the only safe procedure is to use a good high-grade fertilizer at the rate of from 1,000 to 2,000 pounds to the acre and note the results. Market gardeners frequently apply as much as 2,500 pounds of high-grade fertilizer per acre each year.—*Farmer's Bull. 255, U. S. Dept., April.*

ODD JOBS.

In the thirteenth Census are entered some occupations entered with but a single name, among our nearly one hundred millions of people. Machinists come under a single heading; but each machinist is subclassed according to the particular work he is doing, and so with all other manner of industries. For instance, in the shoe trade there are judgers, fakers, plowers, sluggers, busters-out, cripple-chasers and pancake makers. Then there is the "whittler" and the "pouncer" in a hat factory: "tobles" is a maker of stogies; a "dock-walloper" is a sort of longshoreman; a "vibrator" works in a clock factory; a "tonger" has to do with oysters; a "teaser" works in a glass factory.

Some "excuses for living" are odd enough. There is a "snake merchant" who has for seven years and more past run a snake ranch in Texas; and he seems to have got along without competition. In 1910 he sold over 150,000 rattlers and black snakes, to zoological gardens, circus side-shows, medical colleges and biological students; evidently this creepy business pays, for the snakes sell from a quarter of a dollar to two dollars each.

Another citizen in a class all by himself, in Kansas City, bottles the smoke of hickory logs, claiming that when this is let loose in an airtight compartment where meat has been hung, it will produce the same results upon the meat as though it had been smoked in an old-fashioned smoke house.

There is a man out Seattle-way whose business it is to secure the moustaches from walruses killed in Bering Strait. These stout bristles are plucked from the nose of the walrus by Indians, tied into small bundles and sold by the enterprising Seattleite, who made one thousand dollars by this traffic in 1911 to agents on the Pacific Coast; the agents ship them to China, where they are in great demand as toothpicks, In an aged bull walrus the bristles are about a foot long; and nearly as thick as a lead pencil tapering to one end, of course; they are tough and when made into picks can be pushed between teeth without injury to the enamel.

Another man is a tobacco blender for individual smokers. Every fresh customer is asked for a sample of the tobacco he has been using, and for any criticism he had to make regarding it. These facts are entered on a card index; and the blender experiments until he obtains a blend that exactly suits. On his counter, in full public view, is a druggist's hair balance scale, on which are weighed the various brands used in making the blend; as soon as the customer is satisfied the formula is numbered and entered in a "customer's blend book," and the customer is given a card, as: "The number of Mr. Blank's blend in 638; order further supplies by this number." Later this enterprising tobacconist had made a supply of air-tight cartons labeled "my mixture," underneath a blank line for the customer's name.

Who would think of a woman filling the position of a "goat"? This is an occupation almost as pathetic as that of "Nelly the Cloak Model." It is the business of the "goat" to be discharged several times every day from department stores; but unlike many others, she never has any trouble coming back. When a customer with a grouch on complains of discourtesy or inattention a "goat" is summoned, as the person responsible for the department under discipline; she is then given a sound rating before the irate customer; then she weeps copiously, is nevertheless summarily dismissed, to the complete satisfaction of the customer.

Some women raise Persian cats and sell them for from twenty-five to one hundred dollars each, to wealthy cat fanciers; women get incomes of seven hundred a year from pigeon raising. To have dominion over a home satisfies most women; but not all; for there are not a few women desirous of increasing their sphere of usefulness and of authority who have become policemen.

As a general proposition, any one who has a business which he does not share with anyone else, is pretty certain of a living, at least.

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

LEISURE HOUR WAS FOUNDED IN THE BELIEF THAT THE PHYSICIAN IS BUT HUMAN; THAT HE LOVES THE BEAUTIFUL IN THOUGHT AND SENTIMENT AS EXPRESSED IN LITERATURE, AND THAT HE IS AT TIMES SURFEITED WITH TECHNICAL MATTER. SHORT, CRISP CONTRIBUTIONS ON ANY OF THE SUBJECTS NAMED IN THE SUB-HEADING ARE INVITED TO THIS DEPARTMENT.

THE CONQUEST OF OLD AGE.

BY LEON PATRICK, M.D., Los Angeles, Cal.

A sensual and intemperate youth hands over a worn out body to old age.—Cicero.

IN all periods of the world's history, mankind has been personally interested in the game of death-dodging; and the suggestions offered to assure longevity are legion in number. Classic mythology is rich in allusions to fountains in which he who bathed cast off his years as a worn garment and walked, clad in the beauty of his youthful days. The Old Testament promised length of days to those who observed the law. The ancient alchemists spent their nights in the dual search for the power of transmutation that would turn all base metals into gold, and the elixir of perpetual youth. Alcohol was first made known to humanity by a seeker after the immortalizing fluid, and tradition is to the effect that he got hideously drunk in consequence. Queen Elizabeth of England proclaimed that she would enrich and ennoble the first who brought her a small vial of the rejuvenating elixir. Less than twenty years ago Brown-Sequard, the eminent American physiologist of French birth, laid great stress on the efficiency of emulsions made from certain body organs which injected into old men would bring back their vigor. While the liberal use of rouge, powder and dyes that are so much in evidence to-day, is a pathetic though often amusing proof of the desire to hide the prodromes of senility and appear young. However futile all these attempts have been or are, they well illustrate the struggle of mankind to evade the inevitable results of natural law.

The whole trouble is this: we want the pretense of a thing rather than the thing itself. Sooner than pay the price of health and enjoy its reward of long life, the majority want to have their own sweet way about everything, which ends in a short life and a sad one, which is even worse than a short life of a merry one.

We all have a penchant for the pleasures of life and a laudable desire to prolong our term of years on this merry-go-round we call the earth. Yet in seeking length of years it is obvious that there is no purpose to prolong the misery which is invariably associated with the senile state, but to so develop the organism through correct living and prevention of disease that one may pass over a long period of life in active and vigorous health—to be terminated, not by pain, suffering and sorrow but by a natural death—sleep.

Very few men, or women if you please, die of old age. The great majority die because a part gives way from misuse or abuse. In fact, Methuselah was the only individual whose life has not been "nipped in the bud" by the frosts of indiscretion. But thanks to the advancement of personal and public hygiene the average duration of human life is steadily on the increase. If we take the life tables for different periods of England, France, Prussia, Denmark, Sweden and Massachusetts, we find that human life lengthened during the seventeenth and eighteenth centuries at the rate of four years per century: that during the

first three-quarters of the nineteenth century it lengthened at the rate of about nine years per century; that at present it is lengthening throughout Europe at the rate of seventeen years per century, and in Prussia (the supposed home of preventive medicine) at the rate of twenty-seven years per century, while in this country life is lengthening at about fourteen years per century. So it is quite probable that we may yet attain a general prolongation of life the world over that will greatly exceed the Biblical tenure of three-score years and ten.

Nothing is more indicative of such longevity than the great strides in medical discovery, together with the cumulative influence of hygiene. For instance, in India, where medical progress is nearly unknown, the average duration of life is less than twenty-four years and remains about stationary. Ours is forty-five. That is to say, disease does not get an Indian until he is twenty-four, an American until he is forty-five. Our knowledge of hygiene makes the difference. Reduced to mathematical formula the equation reads thus: 24 plus hygiene equals 45. By the same reasoning, 24 plus more hygiene equals 50, 60, 70 or whatever you will. The numerous examples of longevity among the Bulgarians, many of whom are spry and active at 150 years, show that old age is after all a relative term and that a centenarian may be as young and useful as another man at fifty, just as an American at eighty may be no older, physiologically, than the West Indian at forty.

Certain it is—and this you know if not waiting to hire a hearse—that with our present knowledge we should all score our century and over with ease, but to do so it is essential that we keep every vital organ in constant working order and cultivate a hopeful, cheerful and busy mentality.

Regarding the physical phenomena which accompany, and are the cause of, what we call "growing old" there are various opinions. Yet the best authorities on longevity are agreed that this aging process is materially hastened or retarded by the manner of life and the daily habits of the individual. And right here I wish to remind you that the proper time to lay the foundation for a wholesome happy old age is in youth.

We all know that vital force squandered in early life can never be regained. Yet the indifference with which we permit, and often assist, our youthful progeny to dissipate their physical and mental vitality is surely criminal, if not homicidal. Both in the home and at school the influences are such as overstimulate and tend to force the development of body and brain, than which there is nothing more conducive to an early advent of old age.

Nature operates in a certain way, yesterday, to-day and forever. And when mere man attempts to force the development of any plant or animal life he invariably subtracts from its power to live. Nowhere is the philosophy of this assertion more forcefully illustrated than in the training of the human plant.

The tendency of the present day regime is to shorten the period of development and increase the mental and physical capacities, pass over the period of maturity with reckless indifference, and endeavor to lengthen the period of decline. We ignore the mode of living of those who lead a natural life terminating in a natural death. We all want to live long, yet we adopt the mode of life which hastens maturity in the young and decay in the old.

In plain, blunt words, forced development always shortens life. In our homes children are fed beyond their digestive capacity—their physical needs are overestimated. In our schools children are urged to learn more and faster than they should, the curriculum is constantly being enlarged necessitating mental exertion much beyond their youthful capacity and as a consequence the mental faculties become weak or perverted. Add to this the enervation that comes from a lack of needed rest and you have a composite of physical disorders that invite an early death.

Reconstruction and repair occur most rapidly during sleep. Mental and physical activities being most marked during the period of development, a correspondingly large portion of time should be devoted to recreation and rest. But owing to the stress and hurry of present-day life what little rest we get is not commensurate with the work which necessitates it; while the recreation we coerce ourselves to take is so intensified that it becomes exhausting work. Instead of a ramble through the woods which would soothe and calm the tense nerves, school children are compelled to do penance in an illy ventilated gymnasium or coaxed to take up competitive athletics which unduly tax the heart.

Cramming the growing mind to its full capacity, and forcing the physical activi-

ties to their utmost, do not conduce to a sound mind or a sound body. All subjects requiring strenuous study should not be taken up until after puberty. The reasoning faculties should be exercised cautiously and naturally while maturing. The physical development should also be gradual and general. Especially should there be no violent exercise on the part of unseasoned and untrained youngsters.

Instead of trying to shorten the period of development we ought to do all in our power to lengthen it. Fatigue, both mental and physical, should be avoided. When tasks begin to cause strain, they should be set aside for recreation. There should be more frequent recreation periods in school and longer hours for sleep at home.

Insufficient sleep causes insufficient reconstruction and the body does not develop to the full extent. And sleep, be it known, should be regulated by the individual's requirements, and not by the clock, while recreation should be re-creation—an actual diversion. We could all increase our capacity for work and add yours to our life by a little more play each day.

The average man lives too fast. He crowds into twenty-four hours the work of a week. He demands of his brain more than it can do. He eats and drinks too much. He is irrational in his recreations, and self-indulgent sexually. Most of all he does not stop to consider the effects of his strenuous activities—he will not acknowledge that he is injuring himself. Only when his excesses have gone so far as to bring on some diseased condition involving disability or pain, does he realize that he is headed for oblivion on the high-speed clutch.

So it is during the youthful or active period of life that the processes of degeneration really begin, which, imperceptible at first, gradually enervate and destroy vitality until senility supplants youthful vigor at the early age of forty-five. But all this premature decline of the human organism is avoidable—and avoided it must be if each succeeding generation is to get out of life more than its predecessor.

Since there is no single rule or remedy that alone will assure longevity it must be acquired by an early, careful and constant study of all those laws of health which maintain in proper balance the vital processes of waste and repair. So long as the reconstruction process keeps up with, or exceeds, the destructive process, the integrity of the organism is maintained; but just as soon as this balance is lost a rapid decline of the vital powers ensues.

Nothing lowers the vital resistance more than excesses. Length of days comes as a natural sequence of a life of moderation. That word is, indeed, the keynote of longevity. First, moderation in eating. As previously stated, people eat too much and drink too much. Eating has become a habit with almost every one. It is like taking morphine—and the more you take the more you want. Beware of overstimulation from foods, or drinks; for in producing that feeling of exhilaration they must necessarily shorten life and lessen man's capacity for real enjoyment. If there is any excuse for even the most moderate use of alcohol in any of its various forms it has escaped my observation entirely. As for tea and coffee they can not be taken strong or in large or long-continued quantities without predisposing old age.

After forty-five to fifty-five years of age a life of celibacy is to be advised. It assures better health and incidentally greater endurance for men as well as women.

While overwork and deprivation shorten life, judicious physical exertion accompanied by physiological rest is sure to prolong our term of years. Moreover, brain work is just as necessary as physical activity and the man who studies his own case and then plays one kind of work against the other, finds continual joy and zest in life and his days shall be long upon the land.

Above all, avoid the unnatural, precocious development of youth—take some thought for the future. Keep regular hours. Sleep with windows wide open and at least eight hours out of the twenty-four. Dress sensibly. Enjoy both your work and your pleasure. Avoid emotional extremes; likewise vitiated air and overheated rooms as you would poison, for they rob you of vitality. Live as much as possible in the open of God's out-of-doors. And don't be afraid of the sunshine. If often brings health when all else fails. Never fool with doctors, and don't go into a drug store except to buy a tooth-brush or to consult the directory—do but these things and you may rest assured that you will die young in heart and hope no matter how long you live.

FROM OPENING OF THIBET.

By Percival Landon.

It is an austere country into which we are now moving. The lake is a mile long and perhaps 600 yards in width; nearly all the year round it is frozen, though in the bitterest days of midwinter, when the thermometer is nightly going down to 5 or 10 degrees below zero, there is always on the southern side of the lake an unfrozen pool. The cliffs sweep down into the basin, bare and unlovely. To the east, whither our road still is to run, the nakedness of a steep ascent of wearisome boulders is barely hidden by the stunted rhododendron growth. At Changu there is now a comfortable bungalow, and only those in dire necessity will fail to stay the night. The hardest work of all the road to Lhasa lies before us on the morrow; and though I have more than once passed through from Chumbi without a halt, there is no doubt that the exertion can only be justified by real urgency. Leaving Changu in the morning, the traveler, considering the very short way he knows he has to go, will demur at the earliness of his start. But there will be no mercy shown him. He will be allowed perhaps, to ride for 500 yards; after that he will prefer to trust to his own feet until all except the last three miles of the stage have been covered. Climbing over these boulder-strewn surfaces would be bad at the sea-level; here, where air is so thin, it soon becomes a burden to pull one's solid body over the heartless obstacles. If the descent be at all steep, the newcomer will sit down every twenty or thirty yards. His muscles are not tired, and he regains his strength in a surprisingly short time; but at the moment he sinks upon some friendly stone he thinks that another step forward will be his last There is a peculiarity which it is impossible to describe to those who have never been more than a thousand feet or so above sea-level. The lungs seem foolishly inadequate to the task imposed upon them; the pluckiness of one's own heart is an unmistakable, but somewhat terrifying, symptom, for it goes on beating with increasing strokes till it shakes the walls of the body; and not the written testimony of the leading heart expert in London will convince you that it is not on the point of bursting its envelope. Then you may be thankful indeed if you escape mountain sickness. If that should come upon you your bitterest enemy will lead your horse for you. I have seen cases of mountain sickness in which amazement overwhelmed one's sympathy. I have seen men in such a state, that they seem to have every symptom of habitual drunkenness; all the limbs shiver, and in the bloodless face the eyes have that extraordinary look of insanity which is, I think, caused by an inability to focus them. The speech comes with difficulty, and in one case that I saw the mental coherence was as obviously at fault as the physical. But strange though the appearance is to the outsider, for the sufferer himself I do not suppose that there can well be condensed into three or four hours such an agony of aching. The brain seems cleft in two, and the wedge, all blunt and splintery, is hammered into it as by mallet strokes at every pulsation of the heart. Partial relief is secured by a violent fit of sickness (which, however, is not always forthcoming); and through all this you have still to go on, to go on, to go on.

Here, too, the wind exacts its toll, and drives a cold, aching shaft into your liver. This is no slight matter, for the toil of climbing is excessive, and the exertion of covering half a mile will drench a man with perspiration. He then sits down, and this strong wind plays upon him to his own enjoyment, and to the destruction of his lungs.*

Up one still goes till the lake lies a mile behind one, still untouched by the first rays of the dawn. Often a steep descent as

*Pneumonia caused more deaths than any other disease.

treacherous to the foot as the ascent, has to be made. One of the most tedious and tiresome things about this track is the wearisome necessity, which awaits you around every corner, of losing at a stroke two-thirds of the advantage you have just won by an hour's hard work. It appeals to the mind, and shortens the temper at a time when any friction in the human microcosm is waste of strength. One resents the man who first pointed out the track. One is inclined to think, that had one only a few hours more, one could find a far more economical path than that by which one is obliged to go. This, a very common failing, as I have noticed myself, perhaps indicates that one's common sense also is a little affected in these high altitudes. Two miles from Changu is the only level portion of the day's march. One goes across the little plain, and makes for exactly the one point which a stranger would decide to be the most impossible in all the amphitheater.

The Sebu La is beyond question the most difficult point of all the road from Siliguri to the end, a sheer wall of precipitous rock, springing up from the level plain. On looking closely one can see some symptoms of a zigzagging road climbing upward, and by those zigzags you have to go, for the rock allows no other path. This is the most heart-breaking climb of all the day. You may, perhaps, here overtake the slow, painful tramp of the coolies sent on, even before your own rising, from the last stage; pack animals are impossible on a road like this. The strange thick-calves, patient men, carrying burdens which no Englishman would shoulder, move steadily onward over their six-mile stage.

The weight that those Central Asian coolies can carry is astounding; the ordinary load is from 80 to 100 pounds, nearly double a man's pack on the level plain of India. But these Bhutias, when paid by the job, do not hesitate to double, even treble the load. I have myself seen a man carry into camp three telegraph poles on his back, each weighing a trifle under 90 pounds. Further east the tea-porters of Se-chuan are notorious; and loads of 350 pounds are not unknown. Setting aside the story of a Bhutia lady who carried a piano on her head up to Darjeeling from the plains is too well known to be likely to be exact, the record seems to be held by a certain Chinese coolie who undertook, in his own time, to transport a certain casting, needed for heavy machinery, inland to its owner. The casting weighed 570 pounds, and the carriage was slowly but successfully accomplished. An English bricklayer is forbidden by the rules of his union to carry more than 14 pounds.

Between the ranks of thistle, down the road,
The phantom flocks of sunbeams hastily,
With gilded feathers of the butterfly,
Disperse away; anon a weary load
Of grain, wild scented, being freshly mowed,
Comes smoking on; as from the brooding sky
There fall deliberate, still showers of shy,
Big raindrops all around. The teamsters goad
The swaying oxen, steaming, to a shed
For covering. The brown and dusty trees
Are whispering, as eagerly they spread
Their branches in the rain, and stand at ease,
And listen, yonder in the clover bed
The happy buzzing of ten thousand bees!
—The late *Charles Warren Stoddard* in the San Francisco *Monitor*.

A little sun, a little rain,
A soft wind blowing from the west,
And woods and fields are sweet again,
And warmth within the mountain's breast.
—*Stopford A. Brooke*.

The heart two chambers hath
Of joy and sorrow,
The heart two songs doth sing
Today—tomorrow.
The heart two things doth weep
And weeps them ever,
Love that is gone, and love
That cometh never.
—*Goethe*

Pompous Lady—"Must I stick this stamp on myself?"

Post Office Clerk—"Well, you can if you like, but it's intended to be stuck on the letter."

THE ETHNICS OF INFECTION.

Dr. M. H. Foster, Past Assistant Surgeon in the United States Public Health and Marine Service, has predicted the practical extinction, within one or two generations, of the Alaskan Indians, by reason of tuberculosis. Dr. C. P. Hutton, an army surgeon, several years ago reported from Alaska his belief that no other country in the world could show such a percentage of tuberculous natives; "they are everywhere dying of tuberculosis." Such statements might well startle one unacquainted with the history of peoples attacked by an infection which they have hitherto never experienced, and which has been introduced among them by strangers to them—by those not indigenous to their soil, and having no ethnic affiliation with them.

Mr. John Guille Millais, the illustrious son of the great painter has in his book "Newfoundland and its Untrodden Ways," most generously esteemed the Mimacs, those Indians who heretofore have been a most virile tribe: as guides their endurance has been untiring; as canoe men, and in their wilderness contention with elemental environment, they are wonderfully skillful and masterful. But "consumption and the trader's rum are playing havoc with this fine race. In one drunken spree they often waste the earnings of a month of toil. The law forbids the sale of liquor to them; but in the far off outposts the law is a dead letter."

Dr. Grenfell, whose "parish" includes as much of Labrador as he can circumvent, has observed that epidemic diseases have up to recent years been practically unknown along the Labrador coast; "it is a good place for the study of incubation periods." The infections which the natives have contracted have been introduced mostly from regions to the south. In one little Labrador settlement, which was for the first time in its history visited by typhoid fever, Dr. Grenfell when he arrived upon his healing mission, found eighty frozen bodies of those who had speedily succumbed to it. Diphtheria and the exanthemata are much more fatal among the Labradoreans than among us; they have not yet become inured to these diseases of civilization. Especially is tuberculosis fatal, despite that one factor in the cure—fresh, cold air—is ideally circumambient; the Captain of the Men of Death seems to have been unknown until a patient, a stranger coming up from Halifax, introduced him.

Measles is an exanthem comparatively innocuous in civilization; we have long been accustomed to it. But this infection was entirely unknown in the Fiji Islands until some benevolently minded whites introduced it. Thereupon, in a single epidemic 40,000 among 150,000 Fijians—men, women and children, the aged and the young alike—died most miserably of measles. A like epidemic of the same infection visited the Faroes in 1846; of the 7,782 inhabitants of these Islands 6,000 were attacked.

It is the natural history of any infection that it acquires an unwonted malignity when for the first time it invades a race hitherto unacquainted with it. The Pacific Islanders have been like the negro and the Indian, in that consumption was unknown among them until the blessed advent of their white brothers, so eager to assume the "White Man's Burden"—with the sure and substantial fruition of such service. How, oftentimes, since the Carribeans (the name of whom alone is left) has benevolent assimilation spelled pitiless extermination. The negro in his native Ethiopia knew nothing of consumption—nor of syphilis nor alcoholism, nor cocainism either—until the Caucasian came to bestow upon him certain pre-arranged blessings of civilization; now every other adult negro in these United States is dying of tuberculosis, to which those other diseases predispose.

The same dreary story must be related of the American Indians, whenever and wherever we have come among them, with our tubercle bacillus and our fire water—that drink "with the venom of the serpent

and the tongue of a woman"—agencies that are fast, and as surely as the moon changes and the tides rise, bringing about the dusk of that once mighty race of men. The Bureau of the Census in Washington tells us that the Indian is dying of tuberculosis in greater numbers than the negro and in far greater numbers than the whites.

This phenomenon of susceptibility to infection on the part of people first experiencing them is emphasized by the contrasting fact that experience of an infection through many generations renders a race comparatively immune to it. The negro suffers but little from yellow fever and malaria; whilst the Jewish people, during the forty centuries of their existence, have established for themselves a racial immunity to tuberculosis. Such immunity is of course only comparative; Jewish people do become consumptive, yet probably not so frequently as other peoples; they are said to be of all peoples, except perhaps the Quakers, least prone to tuberculosis.

Ethnic susceptibility to infection is a matter well worthy consideration by those who contemplate spreading the blessings of civilization among peoples assumed to be savage and inferior. The white altruist in his explorations of "benighted" regions is much too often accompanied by agencies most cruelly destructive of oftentimes superb peoples.

THE UPLIFT MOVEMENT

A fat, bald man knocked loud. Sez he,
"Please, madam, I am tryin'
T' learn if you attend some church?"
"I do! Me name is Ryan!"

A faded woman came th' next,
"Are you a mother, ma'am?
Statistics I'm collatin' here!"
Sez I, "Seven times I am!"

(Poor thing! her man can't live with her!
'Tis said she drove him wild
With nerves an' cats an' fussiness!
She has not chick nor child!)

As I was busy at th' stove,
A pale, thin girl walked in.
"I seek health topic notes! No doubt
You're careless? Cook in tin?

"Food values—do you know them all?
That stew smells good though! Yes!"
(I felt ashamed my Willie saw
Her thin, tight, low-neck dress!)

When I was tellin' Tim at night,
He laffed; then smoked a bit.
"They've got to earn their livin', Mag!
Don't be preventin' it!

"They put us in their little books,
Our eats, baths, what we do!
But, girl, what keeps them on their jobs?
Th' likes o' me an' you!"

—*Ella A. Fanning.*

THE BACTERIOLOGIC BALL.

A gay Bacillus, to gain him glory,
Once gave a ball in a laboratory.
The fête took place on a cover-glass,
Where vulgar germs could not harass.
None but the cultured were invited
(For microbe cliques are well united),
And tightly closed were the ballroom doors,
To all the germs containing spores.

The Staphylococci first arrived—
To stand in groups they all contrived;
The Streptococci took great pains
To seat themselves in graceful chains.
While somewhat late, and two by two,
The Diplococci came in view.
The Pneumococci, stern and haughty,
Declared the Gonococci naughty,
And would not care to stay at all
If they were present at the ball.

The ball began, and mirth ran high
With not one thought of danger nigh.
Each germ enjoyed himself that night
With never a fear of the Phagocyte.
'Twas getting late, and some were "loaded"
When a jar of formaldehyd exploded,
And drenched the happy dancing mass
That swarmed the fatal cover-glass.

Not one survived, but perished all
At this bacteriologic ball.

—*Journal Tennessee State Med. Assn.*

BOOK NOTICES.

PRACTICAL THERAPEUTICS, Including Materia Medica and Prescription Writing, with a Description of the Most important New and Non-official Remedies Passed Upon by the Council on Pharmacy and Chemistry of the American Medical Association, by Daniel M. Hoyt, M.D., Formerly Instructor in Therapeutics, University of Pennsylvania, Fellow of the College of Physicians, Chicago. Second Edition. Revised and Rewritten. St. Louis, C. V. Mosby Co., 1914. Price $5.00.

THIS is a book for doctors and it is a good book, too. The arrangement is admirable. At a glance the practitioner can get the drug, its physiological action, its toxicology and treatment, its therapeutic indication and contraindication. A most valuable part of the work is the description of all new and non-official drugs that have been passed upon by the Council of Pharmacy of the American Medical Association. One finds also the combination and value of most proprietary remedies. There is a valuable therapeutic index—an essential to such a work. The publisher's claim seems fairly justified that Hoyt's book is an Encyclopedia Britannica on Materia Medica and Therapeutics.

PATHFINDERS OF PHYSIOLOGY, by J. H. Dempster, A. B., M. D., Editor of the Detroit Medical Journal. Illustrated. $1.00.

THIS charming booklet is the result of Dr. Dempster's indulgence in biography as a recreation. Harvey Beaumont, Bernard and many another pioneer are interestingly written up.

TREATMENT OF CHRONIC LEG ULCERS, A PRACTICAL GUIDE TO ITS SYMPTOMATOLOGY, DIAGNOSIS AND TREATMENT, by Dr. Edward Adams, 122 Pages, Cloth $1.00, Published by The International Journal of Surgery Company, 100 William Street, New York City.

THERE is no lesion the successful treatment of which will so greatly enhance the young physician's reputation as that of leg ulcer. Dr. Adams' well-illustrated little book explains how "the stunt" can be done. Nurses would also find this booklet useful.

HEALTH THROUGH DIET. A Practical Guide to the Uric-Acid-Free Diet., by Kenneth S. Haig, L. R. C. P., London., M. R. C. S. Eng. With the Assistance of Alexander Haig, M. O., M. D., Oxon., Phila. J. B. Lippincott Co., London, Methuen & Co. 1914. $1.25 Net.

THIS is a practical book, useful alike to the doctor, the nurse and the layman, founded on the author's personal experiences as a physician of eighteen years, on that of his eminent father and on questions usually asked by patients regarding diet. The subject is indeed most important. "Tell me what you eat and I'll tell you the kind of man you are," observed a really wise man. Again it has been well said that it was really the dyspepsia-breeding frying pan which brought on the Civil War. And no doubt many a divorce, or at least separation, has come about through villainous culinary arrangements. The subject of an ill-chosen diet and of its evil effects on individuals, families and communities has never been sufficiently appreciated. Dr. Haig's book will help to set such matters right.

IRRITABILITY, A PHYSIOLOGICAL ANALYSIS OF THE GENERAL EFFECT OF STIMULI IN LIVING SUBSTANCE. By Max Verworn, M. D., Ph. D., Professor at Bonn Physiological Institute. Octavo. 264 Pages. Diagrams and Illustrations. Price $3.50 net; Postage 20 cents extra.

IRRITABILITY is a problem of fundamental physiological importance. Could we comprehend the essential nature of the irritability of living substance we could fathom the nature of life itself. Professor Verworn's great work, therefore, open up a path to the investigation of life; one finds here such information as the analysis of irritability and of the effect of stimuli can give use of the mechanism of processes in living substance. Verworn begins with a detailed consideration of the origin of the conception of the nature of irritability and proceeds to a thorough treatment of the nature and quality of stimulation, the conception of specific irritability and the effects of stimulation.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M. D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

TENDING THE HUMAN PLANT.

Just as a plant which in time of drought droops and fails, although ordinarily well able to grow and prosper, requires the gardener's hose intelligently applied to keep it from withering, just as a young sapling bent by the winds or by some abnormal defect can be made to grow straight and strong by propping it up until it grows stronger, just as certain soils require fertilizers, so does the human plant require the specific aids its defects demand—NATHAN ROSEWATER, M.D., *in Cleveland Med. Journal.*

THIS is the season when we all delight ourselves in the pleasures of the garden, happy if we possess a bit of land that we can call our own, for one summer at least, and that we can make to bloom and bear fruit for our own gratification. Perhaps we have a strong liking for the wilderness, where Nature asserts herself without competition from the hand of man, where all things grow in response to natural influences and environment, producing a fauna and flora upon which time as we reckon it has wrought few changes. But however we may delight in the primeval gardens that Nature has left for our enjoyment on the slopes of rugged mountains and in the wildest regions to which we have access, we always return with pleasure and surprise to the farms and parks where the hand of man has helped Nature to produce flowers and crops quite out of keeping with the natural environment. The smallest kitchen garden is made up of contributions from other continents across the seas. Man has exiled them from their first home and has made them at home again by adapting soils, shade and moisture to their needs; he has created a new environment in a foreign land; he has naturalized the strangers in the only sure way. The success of the gardener in cultivating exotics is little short of the miraculous.

All things appear to be possible to a Burbank.

In these eugenic days many people are trying to influence humanity in the interests of a wise conservation of the best human stock. Their aim is commendable even if their methods are not always wise. Their work is largely educational and is bound to develop as every great educational movement does. Now is the time when we need a wide dissemination of sound ideas concerning the human body, mind and soul, in order that we may know what human qualities are of most value to the race and how those qualities may best be conserved. Perhaps a new profession, or "specialty" will develop in time—the occupation of Human Husbandry. If so, all that we know to-day about the health of the human being, about his diseases and their successful management, will form the basis of this new science. The best experts in the real work of human husbandry now are the physicians and their assistants, the nurses. Others will have to come to them to learn what they most need to know.

As we enjoy the privileges of some pleasant garden this summer and admire the results of the gardener's art, we ought to take pride in the thought that we are engaged in the more difficult and momentous work of husbanding the human race. The sanitarian studies the environment of man and the various artifices by which it may be made congenial. The physician studies man's enemies and the diseases which they cause; he uses his art for the prevention of disease, keeping the human plant green and vigorous through life. The surgeon prunes and trims the human plant; he even grafts it in order to keep its efficiency up to the mark. The nurse makes human development and reclamation easier and more complete by tending the plant in its times of greatest need. All these workers join hands with the great mass of educators who look especially on the intellectual and spiritual needs of humanity and help the weak and foolish to survive by imparting to them knowledge and incentives.

The garden is big and bewildering and marred by many unsightly patches where work is sadly needed. The workers give too much attention to the more showy human plants which exist mainly to be looked at, and they neglect the plain-looking varieties which often possess more commercial value. This is a reproach to human husbandry which we are striving to remove. We shall have to give attention to everything that grows in this garden, and not to a few special crops in which we happen to be interested.

Does this view of your work seem too figurative—too much like a parable? Then stop, and recall some of the flowers of humanity that you have had the privilege of enjoying—flowers that perhaps you have by your own toil and skill prevented from fading and withering before their time. The picture becomes very real again. You are actually a worker in this garden, taking a very vital interest in the health of your plants, sacrificing your own affairs, if need be, or else waiting for the bell to ring and relieve you at the end of another day's grind.

If you are sometimes tempted to think your work is too laborious and not worth while, remember the words of Dr. Clement Dukes: "I have no hesitation in saying, from a wide experience, that a due amount of care has never yet been bestowed upon the young human being."

SUNSHINE AND ANIMAL LIFE.

We think of the sun as the source not only of light but of life on this earth. The fierce heat of summer often reminds us of the other fact that the sun may strike us down if we are not prepared to withstand the power of his rays. Many deaths are directly attributed to the sun's rays. In fact, as Professor Aron, of the University of the Philippines, has observed, man is able to live in the Tropics only by avoiding such injurious factors as direct sunshine or learning to protect himself when exposed.

Aron proves his assertion by a number of very interesting observations on tropical monkeys. These animals quickly succumb to the direct rays of the sun unless their bodies are constantly cooled by a breeze or by artificial currents of air. It is quite evident that the monkey would be unable to endure the tropical heat if it were not for his habit of living constantly in the shade of the trees.

This lesson ought to have been learned by the human race before this age, but there are still to be found people who will risk themselves in the fiercest sunshine with no protection, until they collapse and have to be cooled off by their excited friends, or, more often by the internes of the nearest hospital. People should not be averse to carrying an umbrella in the sunshine if they cannot enjoy any better shade. Better an umbrella than the hospital bath tub.

Professor Aron has made another observation which he reports with the facts quoted above in the *Berliner Klinische Wochenschrift*. He finds that prolonged sweating with profuse evaporation of water from the skin is liable to cause fatal collapse, similar to that in cholera.

Hard work or exercise in sunlight therefore has a double peril for one who is careless of ordinary precautions—depletion of body fluids and direct heating action of the sun's rays.

BEWARE THE DRY SHAMPOO.

Dry cleaning seems to be the order of the day, even to the "dry shampoo" of the hair. For some time there was a suspicion that this kind of treatment was not perfectly harmless because the barbers in France had noted that their customers were often uneasy and sometimes decidedly ill while receiving their shampoo. The *Journal of the American Medical Association* has reported several fatal cases of poisoning from this treatment. The following case is worth repeating here for the sake of the details given. The scene is in France:

A woman aged 30, on returning home after a trip, wished to clean her hair by the so-called dry method. She went into her dressing-room, which was rather small and was heated by a radiator which raised the

temperature rapidly. After pouring into a basin about two-thirds of the shampoo liquid, she leaned over in order that her hair might fall into the basin. Swiftly overcome by the fumes, she fell backward and lay unconscious for ten minutes, when the maid happened to come in. The patient was put to bed and did not regain consciousness until three hours later, during two of which she presented continuous nervous crises with cries and uncontrollable movements which frightened the family. At this time Dr. Levassort saw her. She was colorless, had an intense headache, suffered nausea and was in a state of hebetude. This continued several days, and for three or four weeks the patient remained in an indescribable condition with mucous pallor and general anemia.

This shampoo fluid is composed principally of carbon tetrachlorid which is in itself dangerous to inhale and has a record of causing several deaths. The case against the dry shampoo is made still worse by the fact that crude material is used rather than the pure drug, in preparing the shampoo; some of the impurities thus introduced add very much to the poisonous effects of the liquid.

THE EXTERMINATION OF FLEAS

David Harum showed himself a true philosopher when he said:

"They say a reasonable amount o' fleas is good fer a dog—keeps him from broodin' over bein' a dog, mebbe."

David fails to state what constitutes a "reasonable amount" for a dog. So far as our own race is concerned we are quite sure that one flea is an unreasonable number, since the flea is convicted of taking a prominent part in the dissemination of plague and possibly other infections, to say nothing of the plain torture that he is expert in causing. We have gathered a few ideas on the destruction of fleas which some of our readers may prize highly if they should chance to run into a colony of these villainous insects, as we have occasionally done.

From India comes the glad news that exposure to direct sunlight kills fleas in a very few minutes, if they have no chance to take refuge in vegetation or other dense shade. Sand forms the best surface on which to expose garments and bedding infected with fleas. The surface of the sand should have a temperature of 120 degrees Fahrenheit before spreading the clothing for disinfecting. If the garments are turned occasionally, the holocaust will be complete in an hour of sunshine. So says Capt. Cunningham, an Indian army surgeon. He also reports that naphthalin is efficient but too slow, requiring from six to nine hours to kill fleas in travelers' baggage.

As to other chemical agents, we find the following excellent conclusions presented by Mitzman, in *Public Health Reports,* July 29, 1910:

> Water, glycerine, alcohol, formalin, phenol, mercuric chloride and trikresol in the strengths used as disinfectants are of little value in killing fleas.
>
> Sulphur as a powder also proved of no value.
>
> Kerosene and miscible oil are extremely efficient as flea destroyers.
>
> The fumigants—bisulphide of carbon and sulphur dioxide (obtained by burning sulphur)—are highly efficient in strengths employed for flea destruction.

A nurse, writing to the *Nursing Times,* gives this experience:

> I see a doctor recommends pyrethrum roseum, and I may say I have been using this powder for five years, and, after having tried numbers of things before in vain, I found this a most wonderful stupefier, and that if it be sprinkled on clothes the fleas rarely attack one. It also has quite a pleasant smell. So now my nerves (and my skin) are not tortured as they were before, nor my life made a burden to me, and I can thoroughly recommend pyrethrum to all who are troubled with these terrible little pests.

Another nurse, who sometimes brings them home with her, says:

> I work in a very rough district, and am often obliged to change all my clothes immediately on my return home before being able to enjoy any degree of comfort. Before undressing I get a basin of cold water, put it on the floor, and then undress carefully beside the basin, and hold each garment over it, when the fleas will usually fall into the water. If they are specially numerous, I fill the bath with disinfectant and water, and proceed in the same way. By this method I have succeeded during ten years' work in keeping myself and my rooms and bedding free of this pest. To ensure being absolutely free, it is well to search the garments thoroughly again before dressing in the morning in case a stray one has remained.

If subject to the attacks of an army of fleas, the victim can not sit down and make

war according to any of the above methods of extermination without first suffering in battle. If there is any way of protecting our bodies from the invasion of fleas, it is worth knowing. We get the following suggestion from a writer in *The Lancet*:

> During residence in a work-house infirmary, which involved frequent visits to the receiving ward, I kept drops of eucalyptus oil on (*a*) ankles, (*b*) wrists, and (*c*) neck, with successful results. I also carried a chloroform drop-bottle for emergencies. At another time, being resident in a hospital, and my bed being infested with pulices, I emptied one ounce of eucalyptus oil on the mattress.

We can imagine the sensation up and down that hospital when the human inmates, to say nothing of *pulices,* scented the smoke of the good doctor's battle. The hospital is the last place on earth where any of our insect pests ought to find comfort.

ORGANIZED HOME CARE FOR THE SICK.

By Richards M. Bradley, Boston, Mass., Trustee of the Thomas Thompson Foundation.

Address delivered in Buffalo, N. Y., Mar. 21, 1914.

(*Concluded from page* 282.)

There is no more difficult situation than that of the graduate nurse at the present time. She is cut off apparently from service to the great mass of people of moderate means, and confined largely to the service either of the well-to-do or to the service of the very poor through endowment or charity. She is subject also to increasing competition from the ex-pupils of rapidly multiplying institutions giving short courses, or correspondence courses.

I do not pretend that this form of office offers a solution for all her difficulties, but it does offer a wider field of service and a larger use for her abilities; it offers not only additional chances for supervising nurses, but the inevitable result of such an office is to bring to notice those cases, in all classes of life, of sickness in the home that can be handled properly only by the graduate nurse. This work brings the family into practical, helpful contact with the graduate nurse so that her true value and the need of her in certain cases can be known and appreciated. I can say this that in spite of the amount of work done by other classes of workers for the sick, there is no more widespread and intelligent use of the graduate nurse than in this community I have described, where such general service has been established.

There is another line in which this development promises better things for the graduate nurse.

When there is a civic organization whose business it is to serve the home, that organization can bring about such benefit insurance as will *put the service of the graduate nurse within the reach of every home that needs her. That is the only adequate solution.* Widespread associations in England have accomplished this with the cottage and visiting nurses by very simple and effective methods, and we can do it here for graduate nurses as well, where graduate service is needed, as it so often is. The great mass of independent people of moderate means cannot be fully served in sickness by endowment, because they are too numerous; nor can they be served by ordinary charity, because they will have none of it. They carry the country, no one can carry them, and they need only the help of organization to carry their own burdens. The only endowment that should be needed is that required to put such organizations on their feet and ensure a good standard of efficiency; the balance of the work for the independent classes should carry itself. The graduate nurse can be brought within the reach of all independent families by means of benefit insurance, as soon as there is established a good, all around system of service for which to insure.

Another point of view from which to look at this work, is that of the non-graduate nurse, who once constituted all the service available. The whole difficulty in the situation has arisen from the newness of the graduate nurse in the field, and the fact that for many things she had to displace the practical nurse. This at first brought

about an attitude of mind on both sides where co-operation was most difficult between the two kinds of nurses, but that stage of development is rapidly passing and we can now look for better things.

There are many women not young enough to enter a training school but well adapted for this work, especially women who have lost their husbands, and women whose children are grown up while they still have abundant strength, energy, and good household experience. From time immemorial, these women have gone into nursing and have constituted the back bone of the nursing occupation, but now they have been told that they are too old to take a hospital course, and that they should not take the responsibility of nursing without such training. As a result their places in the field are largely vacant, and much of their work is not done. Here is an opportunity for these women,—where they can do good work with no reproach of being irresponsible, for it is the business of the office to determine what they can or cannot do, and to supply any deficiency through the supervisor. The distinctive feature of this work is that the less trained woman works under the supervising nurse and gets the benefit of her help and instruction, a much safer way of determining her qualifications than any grading that may be attempted by means of diplomas. There is no question in the minds of those who know the quality of women of this kind available, that they are an element absolutely indispensable in the nursing field.

There is another most important question; namely, the question arising where this work touches on the field of charity and the great and valuable work that organized nursing is now doing in that field.

When organized nursing employing visiting nurses began its work on this side of the Atlantic, it found an enormous task before it, and it did the work that came to its hand in seeking to alleviate in a degree, the enormous mass of distress that comes from the poverty collected in our great cities.

This was good for the poverty, but it was bad for organized nursing, for in the public mind organized nursing has too often become inextricably associated with dependence, and finds this association a most formidable obstacle in extending its usefulness to other classes. A recent address to the public service nurses in convention, by Dr. Frankel of the Metropolitan Insurance Company, who spends hundreds of thousands annually for visiting nurse work, and has a very practical knowledge of the question, fully sets forth this difficulty.

Now this office of ours is expected to deal primarily with the independent classes, composed mostly of people who value their independence and are accustomed to be dealt with in a business way. In order to do our work properly, we have found it desirable to make an entire separation between nursing service and charity administration. This means that while work paid for by charity shall be done by the office, the charity shall not be dispensed by those who do the nursing, and the nursing office shall be opened to the public for nursing and household service, on a basis of entire equality for all.

As this question is a very important one, and its proper solution is vital to the success of any attempt to serve the independent classes, I will give the reasons in full for taking this course.

There are the following objections to stating in the office announcement that the work will be taken at this office for "what people can pay," or that certain kinds of work will be done for certain kinds of persons for less than regular prices, or, what is practically equivalent, for less than cost. This makes the office an agency for relief of a certain kind, as well as an agency for nursing.

Now this announcement that people need not pay regular prices if not able, instead of bringing in more money to be used for the relief of this form of distress, among the people with whom we wish to deal, has exactly the opposite effect from that intended. When the average citizen has trouble about paying his bills, he generally gets some relative or friend to help him out. This announcement that people need not pay if they are hard up, relieves from responsibility those who would otherwise come to the aid of the relative or neighbor who is in difficulty, and makes him think that somebody else has undertaken it. On the other hand, there is nothing in the maintenance on a business basis, or on a basis of equal treatment for all, of the nursing office to prevent the raising from outside sources, the money actually needed for charitable relief of this kind and its use in obtaining service from this office. It may be that the words "business basis" convey a too mercenary idea, and another word may be better. Let us put it this

way. Our organized nursing needs to be civic nursing not charity nursing.

The advantage of this course can be shown by the fact that the Brattleboro office took the following stand, and got the following result:

The report of February 1st, 1910 says:

"There is one thing that we are not trying to do: We do not intend to deprive our churches and other charitable and benevolent organizations of their own peculiar fields for doing good.

"We are a machine for giving service in sickness to all at the least possible cost, but our business is not to provide that cost. Whether the money used through us be a merchant's surplus, a workman's savings, or the allowance of a fraternal order, a church committee's offering, or the funds of a town officer, we are going to try to make the money do better service than ever before, *but it is not our business to provide that money.* We are merely a machine for doing the work, and those who have the work done will furnish the fuel to run the machine.

"We are a machine, that is, so far as money goes, but not a mere machine in another sense. If we cannot make our work a human expression for ourselves and others of the spirit that underlies true neighborliness, our mere working machinery will be worse than useless."

What has been the result of this policy when once understood?

Nursing expenses for those who cannot pay full prices are paid by town officers, tuberculosis association, charitable funds, churches, fraternal orders, friends, relatives, benevolent individuals, and everybody else except by this office.

The office has never committed the iniquity of making money, but it is able to do more work and better work with the money at its command than would be the case if the office said it would remit to those who cannot pay, for by saying this it would really remit, not to those who cannot pay, but to those who ought to help.

Every place has sources that can be drawn upon for the purpose of relief, that will not be reached if this kind of office attempts to undertake the whole thing, instead of simply attempting to furnish the service.

The applicant himself is often among those who can help if he is given a chance; sometimes he fails because of his own fault, but more often because not supplied with the right means of insuring against emergencies. There are sufficient instances of this form of insurance in successful operation. In some regions, hospitals and nursing systems are largely supported by insurance or benefit payments, and any attempt to enable people to pay in this way should not be discouraged by a system of remissions from the nursing office.

Another objection to giving financial relief in any form from the same office where service is arranged for, is that it requires two different kinds of mind, and two different kinds of training, to do these two different things well, and you frequently find a very good nurse with her mind so full of nursing, that she is not adapted for the relief part. Moreover it often embarrasses her nursing work, as it brings in financial disappointments and controversy from which she should be free, if she is to handle the family effectively as a nurse.

The lack of ability of nursing organizations to co-ordinate their relief work with other relief work is sufficiently well known, and the waste resulting therefrom is sufficiently notorious not to need enlarging upon. The latest claim of an enterprising agent of relief in Boston is that she has found as many as nine nursing organizations infesting a single family.

But the last and most important reason, why financial relief should not be mixed with nursing is that it imperils the whole scheme as to its ability to get the work done that should be done. By bringing in this charity element, we give the impression to the class of persons that we want most to reach, that we are in a charitable line. The persons, not considering themselves objects of charity, will fail to take us seriously as an agency for supplying their own wants. You cannot deal with them in that way.

If the office is to cover the field intended, five-sixths of the people who use it would be ordinary citizens accustomed to pay market prices for what they get, and accustomed not to have their financial affairs inquired into except for credit. Their usual attitude toward the office should be like that of the people who deal with the savings institutions and loan associations, where they expect fair rules and require no special favors.

To put it briefly, the work of handling sickness in the homes of the independent people of moderate means, who make up the bulk of the population is a civic work and not work of charitable relief, and it

can be accomplished only by a civic nursing organization, not by a charitable nursing organization.

Since the establishment of this work, certain other experiments have been made on the same line, and more knowledge as to its use elsewhere has been gained.

It has been found that attempts to establish it where it is recommended to persons primarily interested in other things, and only half believe in, or understand it, result in no good. To have any good results, persons are needed in charge who believe in this work, have practical knowledge of its workings, and have a primary interest in making it succeed. It must have workers who are not taking a few half understood features of it in order to graft them onto other methods and ideals that are inconsistent with its basic principles. In addition to this, it must be in the control of a lay body who have a primary interest in having such work established, and are willing to give it sound business counsel and the necessary financial help in starting.

For this reason there has been undertaken a special Bureau for assisting in organizing this work, with the idea of making further studies of the actual needs of various communities in handling sickness, and also of assisting in the starting of a few offices for experiment and demonstration as fast as the proper women can be provided to take charge of them, and responsible civic bodies are found ready to organize and control them. Such offices are to be used as training centres for workers in the field.

This organization has also the additional purpose of getting in touch with and giving help and assistance to persons who have an especial interest in this line of work, and likewise the purpose of getting aid and counsel from all who are interested, for the work is still in its formative stage, and the things to be learned and done are legion.

I have given you what is a far too imperfect account of the nature of this work and of some of its problems and difficulties.

The exact form that I have outlined may not be applicable to all communities, but I thoroughly believe that the basic principles and methods on which it is founded have application in every community from the greatest city in the East to the smallest hamlet in the Northwest.

You may be asking yourselves, what does this mean to our community and to ourselves?

It means this to your community. The test of success in any nation, next to the maintenance of its moral and spiritual integrity, lies not in the great aggregate production of wealth, but in the ability of the average citizen to bring up his family with industry and frugality in home surroundings of reasonable comfort and decency.

In the successful maintenance of millions of such homes lies the strength of the nation, and the weakening of these homes is the weakening of the nation. What we have most to dread in our present condition is the weakening of the home.

Into thousands of homes throughout the land comes needless disaster through sickness that good organization could avert, weakening or destroying those homes one by one. It is the needlessly unfavorable condition that we allow to exist that caused many of these homes to go under in the time of stress, homes that might be saved to add to the nation's strength. Here in the failure of modern advance to help the average home in the hour of trial, is a weak link in the chain that if remedied will make the whole length stronger.

Now do not blame the nurses and doctors for this.

It all comes back in the end to our own personal relations to each other and to the community. Many of us know of the old custom that once was universal, and still exists in many places. The personal help given when the neighbor's home is visited by sickness. How our mothers and grandmothers used to go out, as a regular thing, to watch by the sick and perform with their own hands the offices of birth and death in the homes about them.

Conditions have changed. Greater knowledge calls often for scientific skill that the old household nurse knows not how to render. Social conditions likewise have changed, and strangers from the ends of the earth, who know not each other's ways, are thrown side by side in city and country, many families being far from all kindred and friends, in their time of trouble.

But the spirit of religion and the spirit of humanity have not changed, they are merely searching to find different methods and different means of expression to suit these different conditions.

That is why you are seeking to do by organization what you once were able to

do by individual efforts, and striving to forge new instruments with which to arm the old spirit of human brotherhood.

You all know that increasing wealth does not simplify our church problem. The little frame church built by a few pioneers by the sweat of their own brows, out of their poverty and despite of their hardships, has in it something that the most beautiful and costly structure, that takes its place, may often lack, and can with difficulty attain.

We know we cannot get our religion done for us by money. We cannot hire out our duty to our God. Neither can we hire out our duty to our neighbor, nor place it unreservedly in professional hands no matter how skilled or devoted. It is because we, the civic element, have tried to do this, and have tried to throw over our responsibility upon professional workers, that we have failed so miserably in looking to the welfare of our sick, in spite of all our advance in wealth and knowledge.

It is not the fault of our professional nurses that they have been brought to seek, through legislative action and strict professional rules, an artificial means of upholding the dignity and interest of their profession. It is more the fault of conditions we have imposed upon them, in sending the young nurse forth from her training schools into a weltering chaos, where little or no civic organization exists, and where mercenary motives are too often the only thing in sight.

There are plenty of them who want something better if we will do our part. It is our hope and belief that a better day is dawning when the young nurse in training is to be told that the highest goal of her profession is to make herself not a worker loyal only to a limited body of graduate nurses, but a leader of workers for the sick. One who will be the adviser, supporter and friend of every good woman in her community, who wishes honestly to give her labor, strength, and care to the sick and helpless.

Yet if these things are to be brought about, it can be only because we have more people in every community who feel again that they are the keepers of their brother in sickness, and are giving to the work not only their money, which will be needed but their business brains and their vital interest; who are finding out what the work is that needs to be done for their neighbor in sickness, and are seeing that it is done.

APPENDIX.

A Few Typical Cases.

Taken from Different Offices.

Case No. 1:

This case is an illustration of service to one of the large class who live in boarding houses, and find it desirable, when possible, that the household nurse or attendant should be able to go to her own home to sleep. The patient in this case was a school teacher afflicted with partial paralysis. During the acute stage of the disease she was cared for by a trained nurse. When the doctor thought it expedient, she applied to the office for a woman who could give her the proper care, get her meals, and be an agreeable companion,—as the patient had reached a stage where entertainment was necessarily a part of the cure. She also wished that the attendant, after getting her ready for the night, should go to her own home to sleep, as the boarding house was crowded. An attendant was supplied, at the rate of $15 per week, who met all the requirements. She stayed until the patient was well enough to be taken to the home of a friend who lived in the country. The cost for four weeks was $60.

Case No. 2:

Another case where the nurse went home at night was as follows:

The patient was a boy 8 years old, very ill, and with no hope of recovery. His mother had for more than a year cared for him herself, but she had become worn out, and needed the assistance of some one young enough to play with the child, yet with sufficient experience to watch him closely for symptoms of epilepsy. The attendant would be expected to help in getting the meals, and do whatever might be needed to help the mother, who was a dressmaker, and who tried to do some work

when the child was well enough. As this was the attendant's first case, the charge was $8 per week. She slept at home, but got her meals at the home of her patient. She was retained for eight weeks, leaving at the early part of the summer, when the mother felt that she could resume the full care of the child for the summer at least. The cost to the mother for eight weeks' good service was $64.

Case No. 3:

One of the local doctors called for a nurse to visit one of his patients, to prepare her for an operation, and to arrange to attend the operation the next day. It was an emergency case, and the doctor thought it best that the patient should stay at home rather than go to a hospital. The graduate went as requested, and found the patient in a very nervous condition, and that no arrangement had been made for care of the patient after the operation was over. The nurse talked the situation over with the patient and promised to send an attendant the next day, who would get there before the trained nurse should leave. The attendant would be expected to care for the patient, keep the house, doing whatever was necessary, except the washing, care for four children (the eldest 8, the youngest 3). Everything went very well; the attendant stayed two weeks and left when the patient was able to be up and about. The cost for the attendant was $24. The patient's husband was a carpenter. This case called for a mature woman who had had experience with children,—as the nervous condition of the woman made the management of the children the most important phase of the problem. The nursing care after the first few days was quite simple.

Case No. 4:

An attendant was needed to care for a woman who was suffering with acute rheumatism. Her daughters had been trying to care for her, but were unable to control her. She refused to go to a hospital. The people were middle-class working people, and the attendant was to be paid by a sister-in-law who was a stenographer. An attendant was sent at $12 per week. In two weeks she was worn out and a second was sent, who stood it for four weeks (with the help of a night attendant for about a week). At the end of the fourth week it was thought advisable to remove the second attendant, as she was getting very tired. By this time the patient was physically much better, but was mentally deranged and very hard to care for. The cost for the attendant was becoming a heavy burden, and the office, upon removing the second attendant, sent a third at $10 per week (instead of $12). This case is cited to show the advantage to both patient and attendants when it is possible to remove one attendant and supply another when it is necessary, and to be able to supply relief for a night or two; an attendant, if relieved at the right time, can often carry on a case to a finish, when otherwise she would give out from overwork.

Case No. 5:

A doctor called up to know if the office could supply an attendant,—a good, kind woman who would care for the patient and be good to her three little children. The patient was suffering from a very bad middle ear trouble. The doctor was asked how much the attendant would be expected to do for the ear, and he said nothing, as he was doing all the irrigating himself. All that would be expected of the attendant was good general care. An attendant was sent, and the mother and children were given good care. In this case it was important that the attendant should know how to care for the sick; but it was more important that she should be a good, motherly woman who would relieve the patient of all worry concerning her children and housekeeping. The cost of caring for this case was $45 for three weeks, and the people paid the bill feeling that they had received good service.

Case No. 6:

A newly arrived family, who had no relatives in town. Both father and mother were sick in bed, and there were seven children, all under 12 years of age. The rooms were naturally very unsettled. A helper was sent to do the housework, cooking, laundry, and to take care of the children and of the sick people, under the direction of the visiting nurse. Extra bed linen was lent by the association. The helper stayed ten days until the mother was able to do her own work. The service cost of this case was as follows:

Head nurse	$ 3.50
Helper	10.00
Total	$13.50

TYPICAL DAY OF THE SUPERVISOR.

Left home at 8:30 A. M.; went to Mrs. F., a maternity case. Gave general nursing care to the mother and baby, directed the attendant in the care of the other children and the house.

At 10:30, went to Mrs. E.'s, assisted the attendant in the care of the patient; this also was a maternity case.

Returned to the office at 11:30; worked on reports for an hour.

Rested until 2:30 P. M.

Went to Mrs. L.'s, where household nurse is caring for a baby with influenza; relieved the nurse for two hours' rest, as she had been up the greater part of the previous night. Returned at 4:30 P. M.

Gave office relief from 6 until 9:30 P. M.

Was called at 11 P. M. to go on a maternity case, four miles distant. Made the needed preparations; remained until after the case was over and gave the first nursing care to the mother and child. Returned home at 4:30 A. M.

WORK OF A HOUSEHOLD NURSE FOR ONE YEAR.

Miss Blank.

December 18 to January 4: With an old lady who lived alone. The patient was in a demented condition and later was taken to the Retreat. 17 days.

January 6 to January 9: Cared for an old lady who had recently returned from the hospital. Transferred to another nurse. 3 days.

January 9 to January 11: Cared for a baby during the mother's absence. 2 days.

January 19 to February 1: Cared for a case of influenza. Patient recovered. 12 days.

February 1 to February 22: Went to a maternity case; a trained nurse was present at the delivery, and had the case under supervision. Cared for patient, baby, child of two, and housework. Patient made good recovery. 21 days.

February 25 to March 31: Went to care for a convalescing patient who had recently returned from hospital; did the housework in the family. 35 days.

April 1 to April 13: At the Tuberculosis Camp to assist the nurse and do the cooking. 12 days.

April 14 to May 4: Cared for an old lady with chronic diarrhoea, and got the meals. Patient transferred to the hospital. 20 days.

May 9 to May 23: Cared for a patient with erysipelas; was advised in regard to sanitary precautions before going to the case; called up every day to report. Got the meals for patient and husband. Patient recovered. 14 days.

May 25 to June 8: Assisted in the care of a patient with apoplexy. Transferred to a graduate nurse. 14 days.

June 10 to July 1: Cared for an old lady with a fractured hip. Transferred to care of family. 20 days.

July 10 to July 19: Maternity case, under supervision. Cared for three other children in addition to patient and baby. Patient recovered. 9 days.

July 20 to August 3: Vacation. 14 days.

August 3 to August 10: With an old lady who had a fractured hip. Died. 7 days.

August 13: Tuberculosis Camp for one day.

August 13 to August 29: Tuberculosis case. Transferred to care of family. 16 days.

September 7 to September 17: Maternity case, under supervision. Got meals for family of two. Patient recovered. 10 days.

September 21 to September 23: Was

with neurasthenic patient. Transferred to a sanitarium. 2 days.

September 25 to October 4: With a patient who had cancer of the bowels. Transferred to care of family. 9 days.

October 4 to October 6: Cared for a patient who had indigestion. Got the meals for a family of two. Patient recovered. 2 days.

October 9 to October 30: Maternity case, under supervision. Also cared for child two years of age and housework. Patient recovered. 21 days.

November 7 to November 16: With an old lady who lives alone, and was sick with chronic diarrhoea. Care of patient and housework. Transferred to care of family. 9 days.

November 16 to November 19: Maternity case, under supervision. Cared for patient and, with aid of older children, got meals for family of eight. Patient recovered. 3 days.

November 20 to December 7: Maternity case, under supervision. Housework for family of three. Patient recovered. 17 days.

December 10 to December 20: Maternity case, under supervision. Care of patient, baby and 2-year-old child. Patient recovered. 10 days.

Number of days on duty during the year, 289.

NOTES ON THE CAMPAIGN AGAINST FILTH AND FLIES.

THE long war which began with the slogan "Swat the fly" has only begun but it is a fight to the finish. There are many torpid and dirty folk who are too lazy to take a hand in it, but they will some day be forced into line. The foremost fighters have gone through the first stage, and are applying preventive tactics—trying to see how many flies they can *prevent*. This is a sound sanitary practice and appeals to all thinking people. But there is an enormous lot of hard work ahead of us before we can bring everybody to realize the necessity of this campaign.

We believe that nurses are among the strongest forces for cleanliness and decency in modern life. That is why we are presenting here a few very plain facts to show how some of our sanitarians are striving to educate—and *shame*—our estimable citizens into a more vigorous hatred of one of their most insidious enemies.

If these facts are disgusting, so much the better. We must appeal to our national sense of decency if we are to become more decent. We quote from a review appearing in the *Monthly Bulletin* of the Indiana State Board of Health—a periodical that hews at the root of disease and death.

EATING HUMAN EXCRETA.

Stiles and Keiser in the *Public Health Report* of the U. S. Public Health Service, for November, tell how they have proved that not a small percentage of human beings are constantly ingesting human excreta. They find that certain protozoa (Entamoeba coli, Lamblia and Trichomonas) exist only in human excreta and that these parasites are passed from one human being to another in human excreta. In other words, if the parasites named are found in a person's discharges he got them by eating the infected discharges of another person. Then the investigators further prove that a much smaller percentage of persons using indoor closets are found to be carriers of Lamblia, etc., than are found among the users of outdoor closets or privies. The writers present a faultless argument to show that flies are the principal means of bearing the enteric protozoa to food and thus finally they are introduced into men. "Flies breed and feed by thousands in surface privies and fly to the kitchens that are near by. For instance, in 24 hours' time 293 flies were caught in a Hodge fly trap placed in a privy, and 1,742 flies were caught during the same 24 hours in another flytrap placed in the corresponding kitchen about 40 feet away."

The investigators examined 187 unselected persons and found 30 per cent. infected who lived in houses with outdoor privies and 20 per cent. infected who lived in houses with indoor water closets; however, privies were found in the same or adjoining block of houses; hence these people were still subject to the possibility of fly-borne infection.

PRACTICAL APPLICATION OF THE TEST

We are using this test in a practical way to induce people to improve the sanitation. Upon finding the infection present we notify the mother of the child that the microscopic examination shows that her child has swallowed excreta, probably in food contaminated by flies, from some surface privy; we advise her to request the local health officer to in-

spect the block in which she lives to determine whether there is any insanitary privy near her, supplying her table with contaminated flies, which might continue the infections to her child or other members of the family.

The mother sees some privy in a near-by backyard, sees—as she never saw before— the danger of the surface privy, and she demands an improvement in the sanitation.

Of all methods by which we have tried to arouse sentiment against the surface privy, we know of none equal to this in promptness of result.

The possible exceptions to the fly transmission do not worry us. The water here is sand-filtered and can scarcely play an important role. Flies can and do carry the infections; we demonstrate the presence of the infection; the mother sees the privy and the flies, and she sees that the possibility of continued infection is ever present in this climate.

In cases of necessity we occasionally tell the family that we can not prove whether the infection came from the privy of a white family or of a negro family, and this statement tends to add to the desire to have the insanitary privies made sanitary.

SICKENING

The following is taken from the Seymour *Republican* of recent date:

"Father, Mother and Five Children Ill of Typhoid. Impure Drinking Water is Said to be Cause of Illness in Weber Family Near Dudleytown

"Every member of the family of Henry Weber, of Dudleytown, is ill of typhoid fever. One son, aged sixteen years, died from the same disease last week and was buried Friday. Mr. and Mrs. Weber are both ill and five other children are sick, two of them being in a serious condition.

"The epidemic of typhoid at the Weber home is believed to have resulted from impure drinking water. The supply comes from a well and a spring both of which are in the vicinity of the barn lot. A local physician has charge of the family and is looking into the cause of the disease with which the entire family is afflicted. It is said that the water has been analyzed and has been pronounced impure."

Comment: Whether or not the germs were taken in drinking water, still it is true all of this sickness and death came from ingesting human excreta. Oh! decency and cleanliness where art thou? We advise Mr. and Mrs. Weber to build a sanitary privy.

None of us will have to go outside our own state to discover such fearful conditions as are described above. We may encounter something just as bad in the "summer resort" where we are going for a little rest. If we do, let us preach one plain sermon to our erring landlord and pass on to a more decent resort—before we pass on to the "better land."

As if these frightful details were not enough for the people of his state, read another indictment which the loyal editor of the *Bulletin* hurls at them:

I sat on the porch of a house in a certain town one summer evening. It was hot and sultry. Every once in a while a gentle movement of the air would bear foul odors to my nose. It was the nearby outhouses I smelled. What kind of people are they who have such surroundings. Are they strong-minded and clean? Think of people so disposing of their sewage as to poison the air and also make it possible for flies to transport unspeakable filth to their food. Why shouldn't such people have typhoid fever? They invite it, don't they? Surely, every man is the architect of his own misfortunes. Foul outhouses and flies spell typhoid. Why have them? The answer is simple. They who have them are not of a high order of mentality. They are weak in righteousness and impractical.

If the lives of our citizens are really worth saving, this kind of teaching is worth while. Nothing else will take its place at this stage of the campaign against disease. Now let us get right at the root of the battle for prevention of flies—and typhoid. The *Chicago Sanitary Bulletin,* another educational factor, tells us how:

SWAT STABLE MANURE WITH PARIS GREEN TO PREVENT BREEDING OF FLIES

The favorite breeding place of flies is the manure pile; the great majority of these pesky, dangerous insects comes into life in our stable wastes.

Until recently there was no simple, efficient and inexpensive method known whereby maggot life (the early stage of fly life) could be destroyed in manure without injuring the fertilizing value of the manure.

Paris green in watery solution—1 pound to 25 gallons of water—appears to be the solution of the problem. It proves to be highly efficient as a maggot killer, it is easy of application, comparatively inexpensive and, in a negative way, increases rather than diminishes the fertilizing qualities of the manure.

Take a comon garden watering can, fill it with water, add a teaspoonful of Paris Green and stir until dissolved. Use this daily on the fresh manure and you will swat the fly in the most effective way.

This weak solution is not dangerous to stock; they would have to eat large quantities of the bedding to be affected.

A can of this solution should be kept in every barn in Chicago. Label it "Poison."

Doctors and nurses must never forget that they have a graver responsibility than the citizen who wages war on the fly. They must be in the front of every popular revival of interest in sanitation and personal hygiene, but they must do more; they must see that their own cases are so managed as

to be useful object lessons to the community, and, most emphatically, that they do not become foci for further spread of disease. On this point the *News Letter* says, in a thoughtful editorial:

> Plain cleanliness never seems to appeal to the public at large and the tendency of the times is rather to wheedle or cajole the public than to urge upon them what they do not care for. It seems to them rather amusing, for a time at least, to kill flies. It is interesting to see who will kill the most. But to keep premises clean so that the flies will not breed, to remove all filth and dirt at once so that there will not be contamination for the fly to carry, to keep food clean and covered up so that the fly cannot walk on it and possibly contaminate it, all these things savor too much of work and thought. It is too much trouble to be careful along such lines as those, and yet how much more effective and simple such a course would be. Would it not be well to try to impress the desirability of such care more upon the public mind? As C. E. A. Winslow said some time since regarding disease, in an article in the *American Journal of Nursing*, entitled "The Role of the Visiting Nurse in the Campaign for Public Health": "Yet it is, I think, more and more clear that the real strategic point is by the bedside of the patient and at the elbow of the convalescent or the carrier. Here the chain of infection can be broken far more surely and more economically than at any other point. The prompt detection of infected persons and their isolation are most effective of all methods of stopping the spread of communicable disease and the most universal, if one interprets isolation broadly."

Questions and Answers.

The following answers are not "official." They are prepared for the editor.

VERMONT BOARD OF REGISTRATION OF NURSES.

MONTPELIER, MAY 8, 1913.

PRACTICAL NURSING AND DIETETICS.

Do not write questions—number them and letter sub-divisions.

Only answer ten questions.

1. Name three qualifications necessary for a nurse to have.

Ans. Health, physical strength, intelligence.

2. Name three ways of introducing medicines into the system.

Ans. By mouth, by inunction, by hypodermic injection.

3. How would you collect a twenty-four hour specimen of urine?

Ans. At a given hour have the patient empty the bladder; this urine is discarded. From this time on have all urine passed into a clean container and emptied into a larger container which is to hold the twenty-four hour sample. At the same hour on the next day (twenty-four hours after the beginning of the period) have the patient empty the bladder and add this to the sample, which is then complete. If at any time a portion of the urine is contaminated by feces it must first be measured and then discarded; if some urine is lost during defecation, the amount lost must be estimated as nearly as possible. The amount of urine lost during the period must be reported as "lost" when the specimen is given to the analyst.

4. Define the following:—
a. Subsultus.
b. Tympanitic.
c. Dyspnoea.
d. Cyanotic.

Ans. (*a*) Twitching of muscles and tendons as found in the typhoid state. (*b*) Condition of the abdomen when distended with gas or air; or the bell-like quality of the sound produced by percussing over a cavity filled with any gas. (*c*) Difficult or labored breathing. (*d*) Condition of the skin when dusky or blue from impeded circulation of the blood.

5. How could you improvise a Kelly pad.

Ans. Roll a sheet or single blanket into a rope-like form; roll this by several turns into one end of a rubber sheet or oil-cloth, forming this end into a semi-circle on which the patient lies. The free end of the rubber sheet falls over the side of the bed or table, forming the "apron" of the pad.

6. a. What position would a patient naturally take when suffering from peritonitis? b. Why?

Ans. (a) Flat on the back, with legs and thighs drawn up. (b) Because this position is the one most favorable to relaxation of the abdominal walls and the relief of pressure and tension upon the peritoneum.

7. State in detail your method of making and applying a mustard paste.

Ans. Take 1 part of mustard and from 4 to 10 parts of flour. Make flour into a paste with warm water and stir in mustard thoroughly. Spread on thick muslin with edges turned over; cover free surface with layer of gauze or thin muslin. Anoint skin lightly with sweet oil and apply paste. Lift an edge of the application occasionally to observe the effect on the skin, and remove the paste when the skin shows marked reddening—usually after 5 to 15 minutes.

8. In what way does the serving of food affect digestion?

Ans. Food that appeals to the appetite will stimulate the digestive processes and will usually be digested better than that which makes no such appeal. For this reason the esthetic element is important in the serving of food, particularly during illness. Food should look good, smell good, and taste right. The sight and smell of well served food initiate the digestive processes even before the food is tasted. Most patients respond favorably to the quality of daintiness in the tray, and there are few who do not demand cleanliness.

9. How would you make Kumyss?

Ans. Take 1 tablespoonful water and 1½ tablespoonfuls sugar, make syrup and cook 1 minute. Take 1-6 cake of yeast and soften in 2 tablespoonfuls warm milk. Add these ingredients to 1 quart of warm milk and shake well. Place in sterile beer bottles, well corked, and stand up for 12 hours in temperature of 70 degrees Fahr. Then turn on side and cool slowly. Use after 24 hours. (Pattee.)

10. Explain the advantage of taking a glass of milk slowly.

Ans. Milk ingested slowly into the stomach is considerably diluted by the saliva, which separates the particles of casein and favors the formation of very fine curds. It is also slowly and thoroughly mixed with the gastric juice and thus prevented from coagulating in large masses. There is the same argument for drinking milk slowly that applies to slow and thorough mastication of solid food.

11. Why is bread more easily digested when toasted?

Ans. Because some of the starch granules are converted by heat into dextrose which is more easily acted upon by the digestive juices than other forms of cooked starch. The formation of dextrose is one step in the conversion of starch into maltose.

12. How is the fuel value of food expressed?

Ans. By the number of calories that the foods will furnish when consumed in the body. A calorie is the amount of heat necessary to raise the temperature of one kilogram of water one degree Centigrade; it is equivalent to the force required to lift one ton a distance of 1.54 feet against the force of gravity. The calorie is the *heat unit* of foods.

University of the State of New York

21st Nurses Examination

ANATOMY AND PHYSIOLOGY

Tuesday, January 27, 1914—9.15 a. m. to 12.15 p. m., only.

Answer 10 of the following questions. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.

1. What constitutes the pulse?

Ans. The alternate increase and decrease of blood pressure within a vessel caused by the contraction of the heart, which propels the blood in a series of waves.

2. Locate and describe the tonsils.

Ans. A pair of organs on each side of the fauces, between the anterior and posterior pillars. They consist of glandular tissue (lymphoid), each having 12 to 15 deep openings leading into "crypts" which are lined with mucous membrane.

3. At what age does the cutting of the deciduous teeth begin?

Ans. About six months.

4. Name the three membranes that protect and nourish the spinal cord.

Ans. Dura mater, arachnoid and pia mater.

5. What is the character of the membrane that lines passages and cavities communicating with the exterior?

Ans. The mucous membrane, consisting of a base of connective tissue covered with one or more layers of epithelial cells which constantly secrete mucus.

6. What is the character of the membrane that lines closed cavities?

Ans. Endothelial or mesothelial, membrane, consisting of a thin layer of connective tissue covered with thin, squamous cells, and communicating with the lymph channels by small openings called "stomata."

7. Describe a cell.

Ans. A unit mass of protoplasm, containing a nucleus which is the organ of cell division, and usually covered by a cell wall. Cells and intercellular substance make up all the tissues of the body.

8. Name *three* different channels of elimination by the body.

Ans. The urinary system, the lungs and air passages, the sweat glands.

9. What position do the white blood corpuscles occupy during normal circulation?

Ans. Generally very close to the walls of the blood vessels.

10. Which is the pyloric and which the cardiac opening of the stomach?

Ans. Pyloric, the lower opening or outlet, leading to the duodenum. Cardiac, the upper opening, or inlet, which receives the esophagus.

11. What are glands?

Ans. Organs made up chiefly of epithelium, which remove from the blood various substances known as secretions or excretions.

12. Define (*a*) pneumogastric, (*b*) hypogastric, (*c*) epigastric.

Ans. (*a*) Pertaining to the lungs and stomach, or to the pneumogastric (vagus) nerve, which is distributed to the heart, lungs, stomach and other viscera. (*b*) Pertaining to the lower central portion of the abdomen, lying below the umbilicus. (*c*) Pertaining to the upper central portion of the abdomen which includes most of the stomach.

13. Locate and describe the patella.

Ans. A flat, triangular bone, placed at the front of the knee joint. It is attached by a ligament to the tibia below, and is continuous with the quadriceps extensor and its tendon above.

14. Locate the hard and the soft palate.

Ans. The hard palate forms the roof of the mouth and the floor of the nasal passages. The soft palate is a fibrous and muscular continuation of the hard palate, forming an incomplete partition between the mouth and pharynx.

15. What is protoplasm?

Ans. The "physical basis of life." It is a semi-fluid, albuminous substance of very complex chemical composition, forming the granular portion of cells and possessing the power of growth and reproduction.

University of the State of New York

21st Nurses Examination

MEDICAL NURSING AND NURSING OF CHILDREN.

Tuesday, January 27, 1914—9.15 a. m. to 12.15 p. m., only.

1. What articles should the nurse provide before giving a child a bath?

2. Outline the general nursing care of a case of whooping cough in a four year old child.

3. What special qualifications should a nurse who has the care of sick children possess?

4. What are the bad effects to be watched for and guarded against in giving hot packs or baths?

5. Mention *four* bad effects that may result from neglect of a fever patient's mouth.

6. What is marasmus? Give symptoms.

7. Name important points in the nursing care of marasmus.

8. What are the *three* most important considerations in the nursing of all forms of anemia?

9. How should catheters be prepared for use?

10. Mention some points to remember regarding the care of the catheter while catheterizing.

11. How would you take a throat culture?

12. Mention *three* special points in the nursing of dysentery.

13. What are the signs of hemorrhage in typhoid fever?

14. Describe the appearance of blood in hemorrhage from the lungs. Define the nurse's duties in such an emergency.

15. Briefly outline the general care of a child having any contagious or infectious disease.

OBSTETRIC NURSING.

For Female Nurses.

Wednesday, January 28, 1914—9.15 a. m. to 12.15 p. m., only.

1. What antiseptic solutions should be prepared for use in the care of the mother and the newborn infant?

2. Give the strength of each solution mentioned in answer to question 1.

3. Describe the brim of the pelvis.

4. Give a full description of the structure and the function of the Fallopian tubes.

5. Define (*a*) mastitis, (*b*) primipara, (*c*) puerperium, (*d*) obstetrics, (*e*) embryo.

6. Give the three stages of labor.

7. What is meant by a "blue" baby?

8. Give the symptoms of puerperal infection.

9. Describe the routine care of a patient on the eighth day after a normal delivery.

10. Outline the daily care of an infant eight days old.

11. What is the nursing treatment for enlarged breasts in an infant?

12. Describe the nursing care of ophthalmia neonatorum.

13. State the nursing care after a primary perineorrhaphy.

14. Give the care necessary for the infant's feeding bottles and nipples.

15. What is an ectopic gestation?

Have your answers to these questions ready for comparison with the answers to be given in a later number of the GAZETTE.

THE LITTLE BOY'S PRAYER.

"Dear God, I need You awful bad,
I don't know what to do;
My papa's cross, my mamma's sick,
I hain't no fren' but You.
Them keerless angels went an' brung,
'Stid of the boy I ast,
A weenchy, teenchy baby girl;
I don't see how they dast!

Say, God, I wish't You'd take her back,
She's just as good as new;
Won't no one know she's secon'-hand,
But 'cepting me and You.
An' pick a boy, dear God, Yourself,
The nicest in yer fold;
But please don't choose him quite so young,
I'd like him five years old."

—*Medical Brief.*

MEN who are occupied in the restoration of health to other men, by the joint exertion of skill and humanity, are above all the great of the earth. They even partake of the divinity, since to preserve and renew is almost as noble as to create.—VOLTAIRE, *Philosophical Dictionary.*

DISPATCH is the soul of business; and nothing contributes more to dispatch than method. Lay down a method for everything—and stick to it.—CHESTERFIELD.

IT isn't the work we intend to do,
Or the labor we've just begun,
That puts us right on the ledger sheet
It's the work we've really done.

NEITHER ANGELS NOR LADIES.

I WAS driving on the top of a coach a few weeks ago, and found the man who blows the horn most attentive. He made it his business to point out all the little things of interest on the journey, and put folded horse-blankets for us to serve as footstools and to keep our feet warm.

At the end of the journey I thanked him for his kindness.

"That's all right, nurse, you need not thank me; I always do everything I can for nurses, and if the coach were mine they should ride for nothing. You see, it's like this, nurse. I was ill last year in hospital for two months; poisoned my arm; couldn't wash myself, couldn't do nothing. Well, you know what that means, so I needn't tell *you* all those nurses did for me. I didn't like it, I can tell you, and I said so, and Nurse Agnes said to me, she says, 'Just you think that you are a little boy again, and I'm your mother. I never think of any of the men in this ward as "men," but just as children, and I'm mother to all of you,' and she was that. If ever an angel walked this earth it is Nurse Agnes. They were all good to me, but I liked her best. It beats me how they ever get any ladies to be nurses, for they work hard, and it ain't always nice work either, as you know yourself.

"Of course, it's very little a rough chap like me can do for a lady, but I do what I can. I take them a bunch of flowers sometimes, and if ever any nurse comes on this coach I see as she is properly looked after."

"That is very kind of you," I said. "We have enjoyed ourselves very much—much more than we should have done if you had not been so kind to us."

"That's all right, nurse. I only wish I could have every lady out of that hospital and give 'em a drive once a week. Ladies I call 'em but, of course, we know they're not, nor angels neither, but I often calls 'em both. Good afternoon to you, and if you are ever this way again I shall be glad to see you."—M. H. in *The British Journal of Nursing.*

PLANNING THE FAMILY MEALS.

THE foods which best serve certain food needs are discussed in a new lesson in the reading course for farm women given by the home economics department of Cornell. This lesson is called "Rules for Planning the Family Dietary," and it tells the housekeeper what foods to use to provide her household with the proper amount of energy and iron. Milk, eggs, meat, legumes, cereals, make living tissue grow; cereals, legumes, fats, sugars, and starches yield energy; milk, legumes, and whole cereals supply lime; eggs, legumes, oatmeal, vegetables, and fruits produce iron. Mild-flavored, non-stimulating, simply prepared, and easily digested foods should make up the main part of every meal. Eggs should always be used, when they can be afforded—a wise consideration. Much water should be consumed, and fruit and vegetables used liberally. Cereals and cereal food which include the outer layer of the grain are better than those that have had this layer removed. And, always, the age, vigor, and activity of the individual should determine the strength of his food.

Not in self-searching do I find
The secrets of my heart and mind.

On bridges where the 'buses roll
I trace the pattern of my soul.

In roaring wheel and screaming horn
My greed sings out her chant forlorn.

Each thin face and hungry eye
Reveals my inner poverty.

In dank gray beard and shaking head
Lies my cherished beauty dead.

In that pale twisted child I see
Upheld my own deformity.

In crumbling arch and mouldering stones
I feel my jerry-builded bones.

. . . . .

Then when at dusk I leave the town
And find the earth in her green gown,

I meet my virtues one by one
Standing in the evening sun.

—From "The Dark Road," by Edith Anne Stewart in the London *Nation.*

COSTS MOST PER POUND but has what people want—QUALITY

Perhaps the one food you have never tried

HOYT'S GUM GLUTEN BREAKFAST FOOD

Extracted from wheat—the protein—the nutty flavor—the part of flour that builds the nerves—makes one feel good.

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Marketed in Ampules, 6 to a package for $1.50

5 c. c. bulk packages in special aseptic container averaging 8 doses for $1.00.

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Sherman's New Non-Virulent T. B. Vaccine

—prepared from a special non-toxic strain of tubercle bacillus. This T. B. Vaccine possesses unusual immunizing and therapeutic virtues, and is sold in 5 c. c. bulk packages for $1.00, and 18 c. c. packages for $3.00.

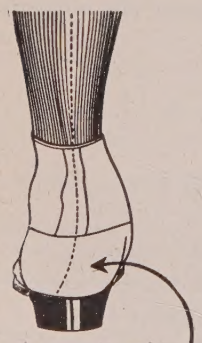
List No. 44, 100,000,000 organisms per c. c.
List No. 45, 500,000,000 organisms per c. c.

Bacilactic Drains—Persson's

Used as a local treatment in sub-acute and chronic urethritis; 25 treatments for $2.00.

Write for Literature

G. H. SHERMAN, M. D.,
DETROIT, MICHIGAN



A pronounced case of fallen arch, photographed in the shoe worn at the time the patient was sent to the Coward Store for attention.

The Coward Shoe

"REG. U. S. PAT. OFF."

In Treating Weak Arches

and ankles, either in the incipient or advanced stages, careful physicians understand the importance of employing corrective mechanical assistance.

Same foot after being fitted in a Coward Arch Support Shoe; ankle kept upright, arch held in place—weight of body equally distributed.

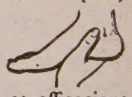
COWARD ARCH SUPPORT SHOES

WITH COWARD EXTENSION HEELS

are of immediate benefit in all cases of structural foot weakness, including "turned" ankles, weak ligaments, falling arch and flat-foot.

Constructed on approved anatomical principles, these remedial shoes provide the needed support, without discomfort to the wearer, or interference with the muscular action of the feet.

The helpful, upward pressure of the Coward Arch Support, rests strained ligaments, relieves the pain, and in many cases effects a speedy recovery.



Coward Arch Support Shoes are of special assistance in treating arch and ankle weakness of growing feet, and are as efficacious in preventing the foot troubles of childhood as in their treatment and correction.

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TREATISE on "FLAT-FOOT" MAILED UPON REQUEST

THE DELICATE SCHOOL GIRL.

EVEN the most robust and generally healthy children show the deleterious results of the modern system of educational "forcing" that prevails in most of our larger cities. The child that starts the school year in excellent physical condition, after the freedom and fresh air of the summer vacation, in many instances, becomes nervous, fidgety, and more or less anemic, as the term progresses, as the combined result of mental strain and physical confinement in overheated, poorly ventilated school rooms. How much more likely is such a result in the case of the delicate, high-strung, sensitively organized, adolescent girl? It is certainly a great mistake to allow such a girl to continue under high mental pressure, at the expense of her physical health and well being, and every available means should be resorted to to conserve the vitality and prevent a nervous breakdown. Regularity of meals, plenty of sleep, out-of-door exercise without fatigue, open windows at night and plenty of nutritious food, should all be supplied. Just as soon as an anemic pallor is noticeable, it is a good plan to order Pepto-Mangan (Gude) for a week or two, or as long as necessary to bring about an improvement in the blood state, and a restoration of color to the skin and visible mucous membranes. This efficient hematinic is especially serviceable in such cases, because it does not in the least interfere with the digestion nor induce a constipated habit.

COD LIVER OIL IN HOT WEATHER.

It is not necessary to stop the employment of cod liver oil during the heated term. One need but employ Cord. Ext. Ol. Morrhuae Comp. (Hagee), from which the nutritive advantages attaching the crude oil may be obtained.

In Cord. Ext. Ol. Morrhuae Comp. (Hagee), the physician has at his command an admirable tissue food, and one which he may depend upon at all seasons of the year.

CONDITIONS OF REDUCED VITALITY.

It is especially in states of lowered vitality following continued application of whatsoever character marked by loss in bodily strength and nervous force, that Cord. Ext. Ol. Morrhuae Comp. (Hagee) is of more than ordinary value. It is not alone a tissue food but also serves as a nerve tonic. A distinctive feature possessed by the cordial is its palatability, an advantage appreciated particularly by women and children.

Hay Fever, both acute and chronic, is being successfully combatted with Respirazone. Those of the profession not familiar with the article may obtain a free sample by writing to The Tilden Company, New Lebanon, N. Y., or St. Louis, Mo. This is one of the very reliable prescriptions in Hay Fever and Asthma, and has rendered valuable service.

THE answers to the following questions are not official. They are prepared for the editor:

THE automobile is a rubber-tired cash separator, which is being used largely to keep prosperous American citizens from worrying over how to invest their money.—GEORGE FITCH.

A HUNGRY typhoid convalescent demanded something to eat. The nurse gave him a spoonful of tapioca.

"Now," he said, fretfully, "I want to read a little. Bring me a postage stamp."—*Merck's Archives.*

IGNORANCE of one's misfortunes is clear gain. —EURIPIDES.

TELL me what company thou keepest, and I'll tell thee what thou art.—*Spanish Proverb.*

THERE is no way of permanently settling any great question involving the welfare of human kind except on the basis of right and justice.—ELBERT H. GARY.

Puny Children

It is often puzzling to the family physician just what to do for the pale, anemic, apathetic youngster whose nutrition is far below the normal and refuses to react to the routine treatment which is potent in others.

The trouble seems to be, not in the excellent remedies administered, but in the inability of the little patient's digestive organs to take up either food or medicine sufficiently to restore normal metabolic function, and thus assimilate elements of nutritive importance.

It is in just such conditions that the famous cereal food—

Grape-Nuts

eaten with rich milk or cream, acts with nice felicity in a double function.

(1) ***As a cell food.*** Made of wheat and barley, including the "vital" phosphates, Grape-Nuts affords, in a most appetizing and assimilable form, the nourishing elements of the grains required by the body cells.

(2) ***As a digestive adjunct.*** Partially predigested and rich in phosphates as it is, Grape-Nuts assists the natural metamorphosis of starches and sugars by its wholesome digestive-aiding content.

The ***Clinical Record,*** for Physician's bedside use, together with samples of **Grape-Nuts, Instant Postum** and **Post Toasties** for personal and clinical examination, will be sent on request to any Physician who has not yet received them.

Postum Cereal Co., Ltd., Battle Creek, Mich.